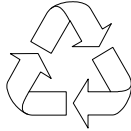


Aspire AX1400

Desktop Computer Service Guide



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Revision History

Refer to the table below for changes made on this version of the Aspire AX1400 Desktop Computer Service Guide.

| Date | Chapter | Updates |
|------|---------|---------|
| | | |
| | | |
| | | |

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Conventions

The following conventions are used in this service guide.

| | |
|------------------------|--------------------------------------------------------------------------------------------------------------|
| SCREEN MESSAGES | Denotes actual messages that appear on screen. |
| NOTE | Gives additional information related to the current topic. |
| WARNING | Alerts you to any physical risk or system damage that might result from doing or not doing specific actions. |
| CAUTION | Gives precautionary measures to avoid possible hardware or software problems. |
| IMPORTANT | Reminds you to do specific actions relevant to the accomplishment of procedures. |

Service Guide Coverage

This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for our "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.

FRU Information

Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed service guide. For AUTHORIZED SERVICE PROVIDERS, your office may have a DIFFERENT part number code to those given in the FRU list of this printed service guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

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Features and Specifications

This chapter lists the features and specifications of the Aspire AX1400 computer.

NOTE The items listed in this section are for reference only. The exact configuration of your PC depends on the model purchased. Refer to the FRU list chapter on page 69 for a detailed list of models supported by each hardware component.

System Features

| Component | Description |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating system support | <ul style="list-style-type: none"> • Microsoft Windows 7 Home Basic (X64/X86) • Microsoft Windows 7 Home Premium (X64/X86) • Microsoft Windows Starter X86 • Microsoft Windows XP Home X86 • Ubuntu X-windows version • FreeDos |
| Processor | <ul style="list-style-type: none"> • Sockets AM2+/AM3, 941 pin contacts • Supports the following AMD processors: <ul style="list-style-type: none"> – Phenom II 705e and 700e – Athlon II x3 405e and 400e – Athlon II x2 255, 250, 245, 240 – Athlon II x2 215, 240e and 235e – Athlon II x2 B24 and B22 – Athlon II x2 260u, 250u, 160u and 150u – Sempron 140 |
| Chipset | <ul style="list-style-type: none"> • NVIDIA® nForce® 430 MCP (MCP61), or • NVIDIA® nForce® 730a/720a MCP (MCP78) |
| Graphics controller | Integrated in the NVIDIA® nForce® Chipset |
| Memory | <ul style="list-style-type: none"> • Two DIMM slots supporting 240-pin unbuffered DDR3 SDRAM modules • Data rate supported: 800/1066/1333 MT/s • Maximum memory: 4 GB (using two 2 GB modules) |
| Expansion options | <ul style="list-style-type: none"> • One PCI Express x16 slot (reserved for GPU card installation) • One PCI Express x1 slot |
| Connectivity | <ul style="list-style-type: none"> • Wired LAN: Realtek RTL8201EL (Single-Chip/Port 10/100 Fast Ethernet PHYceiver with Auto MDIX) • WLAN option: 802.11 b/g/n wireless network adapter |
| Hard disk drive (HDD) | <ul style="list-style-type: none"> • One HDD bay supporting 3.5-inch 25.4 mm SATA HDDs • Support 7200 rpm SATA HDD in 320 - 1000 GB capacities |
| Optical disc drive (ODD) | <ul style="list-style-type: none"> • One ODD bay supporting 5.25-inch standard SATA ODD • Supports DVD-R/RW drive or DVD-Super Multi double-layer drive |

| Component | Description |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Card reader (optional) | <ul style="list-style-type: none"> 9-in-1 card reader (optional) The following memory cards are supported: <ul style="list-style-type: none"> Memory Stick (MS), Memory Stick Micro (M2) xD-Picture Card (xD) Secure Digital (SD), MultiMediaCard (MMC) CompactFlash, Type I/II (CF, Type I and II) Memory Stick PRO (MS PRO) |
| TV tuner (optional) | AVerMedia H751 PCI-E Hybrid Analog/ATSC Card |
| Power supply | 220 W power supply unit (non-PFC, non-power factor correction) 220 W power supply unit (PFC) |
| Antivirus software | Norton Internet Security |
| System BIOS | <ul style="list-style-type: none"> AMI BIOS with 8 MB SPI ROM Supports ACPI revision 2.0 standard Supports Plug and Play, STR(S3)/STD(S4), hardware monitor, Multi Boot, and DMI protocols |
| Power management | <ul style="list-style-type: none"> ACPI 2.0 or 1.0b (Advanced Configuration Power Interface) standard S0, S1, S2 and S5 sleep states support On-board device power management support On-board device configuration support |

Audio

| Item | Description |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Audio codec | <ul style="list-style-type: none"> Realtek ALC888S 7.1+2 Channel High Definition Audio Codec, or Realtek ALC662 5.1 Channel High Definition Audio Codec |
| Audio jacks | <ul style="list-style-type: none"> Front panel: Headphone and microphone jacks Rear panel: Microphone, line-out, and line-in jacks |

I/O Ports and LED Indicators

| Component | Description |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| I/O ports | <ul style="list-style-type: none"> Front panel <ul style="list-style-type: none"> USB ports (five) Headphone jack Microphone jack CF card slot Memory Stick PRO card slot Rear panel <ul style="list-style-type: none"> PS/2 keyboard and mouse ports External display (VGA) port USB ports (four) Ethernet jack (RJ45) Microphone, line-out, and line-in jacks |
| LED indicators | <ul style="list-style-type: none"> Hard drive activity Power status |

Physical Specifications

| Aspect | Description |
|-------------------------------|----------------------------------------|
| Chassis dimension (W × D × H) | 100 mm (W) X 367.8 mm (D) x 269 mm (H) |
| System weight | 5.808 kg. |
| Mainboard form factor | microATX (μATX) |
| Mainboard dimensions (W × H) | 244 × 220 mm |

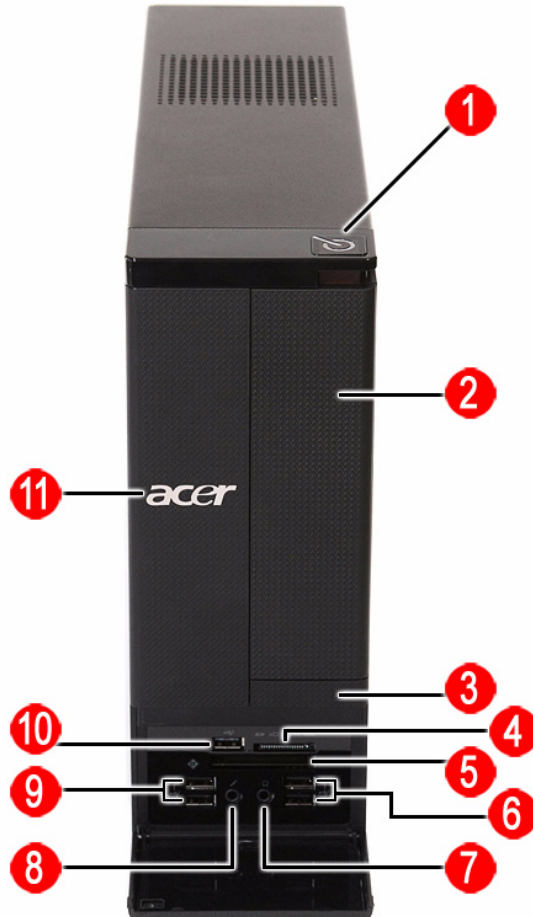
Environmental Requirements

| Aspect | Description |
|-----------------------|------------------------------|
| Operating temperature | 5 to 35 °C (41 to 95 °F) |
| Operating humidity | 15% to 80% RH non-condensing |

System Tour

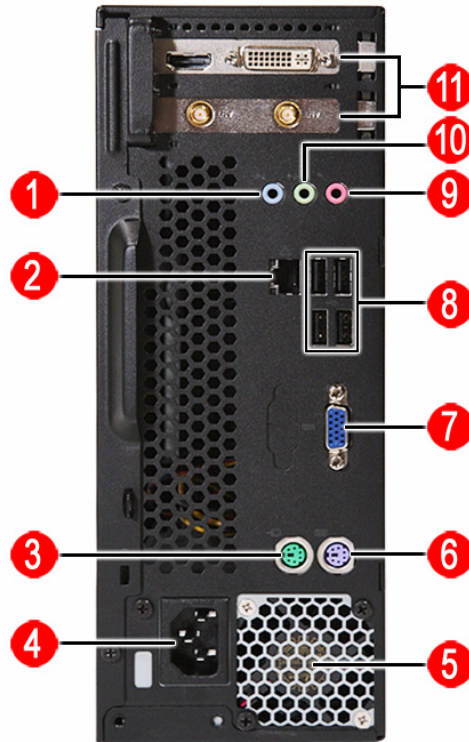
The pictures and tables in this section illustrate the physical outlook of the computer.

Front View



| No. | Component |
|-----|-------------------------------------------------------------------|
| 1 | Power button/indicator |
| 2 | Optical drive cover |
| 3 | Optical drive button |
| 4 | XD (XD-Picture) and SD/MMC (Secure Digital/MultiMedia Card) slots |
| 5 | CF card slot (Type I and II) |
| 6 | USB 2.0 ports |
| 7 | Headphone jack |
| 8 | Microphone-in jack |
| 9 | USB 2.0 ports |
| 10 | USB 2.0 port |
| 11 | Acer logo |

Rear View



| No. | Component |
|-----|--------------------|
| 1 | Line-in jack |
| 2 | LAN connector |
| 3 | PS/2 mouse port |
| 4 | Power connector |
| 5 | Fan aperture |
| 6 | PS/2 keyboard port |
| 7 | Monitor port |
| 8 | USB 2.0 ports |
| 9 | Microphone jack |
| 10 | Line-out jack |
| 11 | Expansion slots |

System Utilities

CMOS Setup Utility

CMOS Setup Utility is a hardware configuration program built into the system ROM. Since most systems are already properly configured and optimized, there is normally no need to run this utility.

You will need to run this utility under the following conditions:

- When changing the system configuration including:
 - Setting the system time and date
 - Configuring the system drives and peripherals
 - Specifying the boot device sequence
 - Configuring the power management modes
 - Setting up system passwords or making other changes to the security setup
- When trying to resolve IRQ conflicts
- When a configuration error is detected by the system and you are prompted ("**Run Setup**" message) to make changes to the BIOS settings.

The Setup Utility loads the configuration values in a battery-backed nonvolatile memory called CMOS RAM. This memory area is not part of the system RAM, which allows configuration data to be retained when power is turned off. The values take effect when the system is booted. POST uses these values to configure the hardware. If the values and the actual hardware do not agree, POST generates an error message. You must run this utility to change the hardware settings from the default or current configuration.

IMPORTANT If you repeatedly receive "**Run Setup**" messages, the RTC battery located on the mainboard (BT1) may be defective. In this case, the system cannot retain configuration values in CMOS. Replace the RTC battery with a new one.

NOTE For ease of reading, CMOS Setup Utility will be simply referred to as "Setup" or "Setup Utility" in this Service Guide.

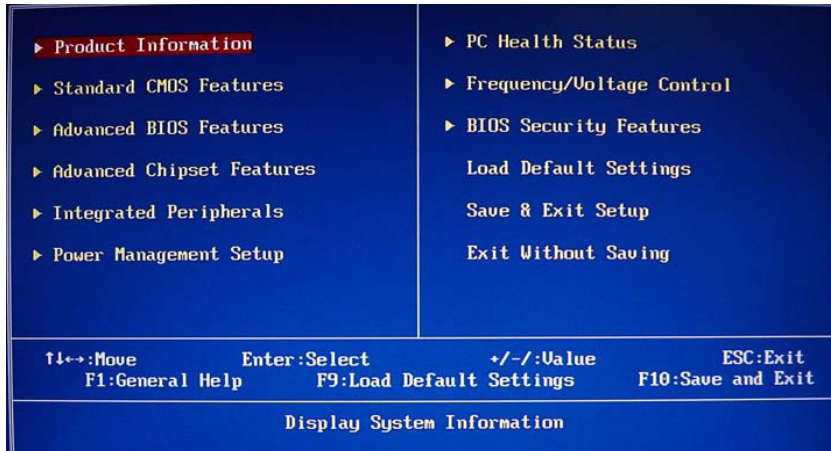
Accessing the Setup Utility

1. Turn on the computer.

If the computer is already turned on, save your data and close all open applications, then restart the computer.

2. During POST, press **Delete**.

If you fail to press **Delete** before POST is completed, you will need to restart the computer.



Use the **Up/Down/Left/Right** arrow keys to move between the menu options, then press **Enter** to execute that option.

Some options lead to pop-up dialog boxes that prompt you to verify that you wish to execute that option. Other options lead to dialog boxes that prompt you for information.

Some options (marked with a ▶) lead to submenus that enable you to change the values for the option. Use the **Up/Down/Left/Right** arrow keys to scroll through the items in the submenu

Navigating through the Setup Utility

Use the keys listed in the legend bar on the bottom of the Setup screen to work your way through the various menu and submenu screens of the Setup Utility. The table below lists these legend keys and their respective functions.

| Key | Function |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Up/Down/Left/Right arrow keys | Move the cursor to the menu/field you want. The currently selected field will be highlighted. |
| Enter | <ul style="list-style-type: none">To open the page for the currently selected menu/submenuTo apply a field value. |
| PgUp and PgDn | Move the cursor to the previous and next page of a multipage menu. |
| Home | Move the cursor to the first page of a multipage menu. |
| End | Move the cursor to the last page of a multipage menu. |
| + and - | To select a value for the currently selected field (only if it is user-configurable). Press these keys repeatedly to display all possible entries. A parameter that is enclosed in square brackets [] is user-configurable. Grayed-out parameters are not user-configurable for one of the following reasons: <ul style="list-style-type: none">The field value is auto-configured or auto-detected.The field value is informational only.The field is password-protected. |
| Esc | If you press this key: <ul style="list-style-type: none">On one of the primary menu screens, the <u>Exit</u> menu displays.On a submenu screen, the previous screen displays.When you are making selections from a pop-up menu, closes the pop-up without making a selection. |
| F1 | To bring up the <u>General Help</u> window. The <u>General Help</u> window describes other Setup navigation keys that are not displayed on the legend bar. |
| F9 | Press to load default system values. |
| F10 | Press to save changes and close the Setup Utility. |

Setup Utility Menus

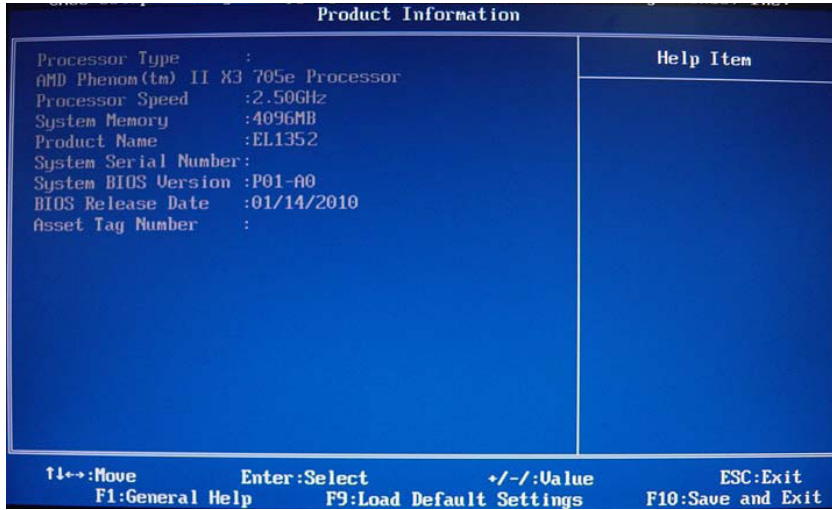
The Setup Utility has twelve menus for configuring the various system functions. These include:

- Product Information
- Standard CMOS Features
- Advanced BIOS Features
- Advanced Chipset Features
- Integrated Peripherals
- Power Management Setup
- PC Health Status
- Frequency/Voltage Control
- BIOS Security Features
- Load Default Settings
- Save & Exit Setup
- Exit Without Saving

- NOTES**
- The screenshots used in this section are for illustration only. The values displayed may not be the same as those in your computer.
 - In the descriptive tables following each of the menu screen illustrations, settings in **boldface** are the default and suggested settings.

Product Information

The Product Information menu displays basic information about the system. These entries are for your reference only and are not user-configurable.



| Field | Description |
|----------------------|------------------------------------------------|
| Processor Type | Type of processor installed on the system |
| Processor Speed | Speed of the processor installed on the system |
| System Memory | Size of system memory detected during boot-up |
| Product Name | Official model name of the computer. |
| System Serial Number | System serial number. |
| System BIOS Version | Current system BIOS version |
| BIOS Release Date | Date when the CMOS setup utility was released. |
| Asset Tag Number | System asset tag number |

Standard CMOS Features



| Field | Description | Value |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| System Date | Sets the system date. | MM/DD/YYYY (month/day/year) |
| System Time | Sets the system time. | HH:MM:SS (hour:minute:second) |
| SATA Port 1–2 | Your Aspire computer supports two SATA channels, each channel allows one SATA device to be installed. Press Enter to display the individual configuration screen of installed SATA drive(s). | |
| Halt On | Determines whether the system will stop for an error during the POST. Options include: <ul style="list-style-type: none"> All Errors - Any error detected will pause the system. No Errors - BIOS will ignore any errors detected during POST All, but Keyboard - If a keyboard error is detected, BIOS will pause the system. | All Errors No Errors All, But Keyboard |

Advanced BIOS Features



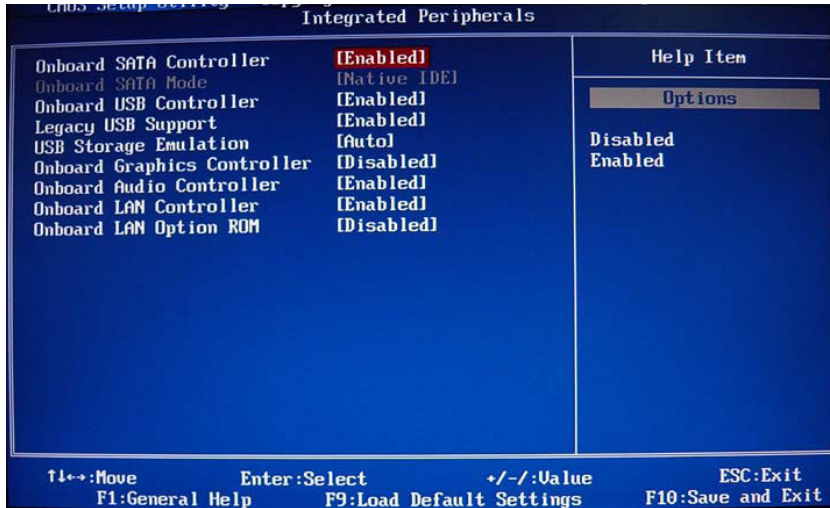
| Field | Description | Value |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Quick Boot | When enabled, the system starts up more quickly by elimination of some of the POST routines. | Enabled Disabled |
| Quiet Boot | When enabled, BIOS will show a full screen logo when booting; if disabled, BIOS will show the diagnostic POST screen when booting. | Enabled Disabled |
| 1st/2nd/3rd/4th Boot Device | Displays the device assigned to the specified boot sequence. The Setup Utility attempts to boot the operating system in this order. By default, the computer searches for boot devices in the following order: <ul style="list-style-type: none"> • Hard disk • Optical drive (CD/DVD) • Removable device • Network boot (LAN) | |
| Hard Disk Drive Priority | Press Enter to specify the boot device priority sequence for the installed hard drive(s). | |
| Optical Disk Drive Priority | Press Enter to specify the boot device priority sequence for the installed optical drive. | |
| Removable Device Priority | Press Enter to specify the boot device priority sequence for removable drives. | |
| Network Device Priority | Press Enter to specify the boot device priority sequence for available network drives. | |
| Bootup Num-Lock | If you set this item to On, the keyboard Num Lock key will be active when the computer boots up. | On Off |
| Boot Sector Virus Protection | If set to Disabled, when anything attempts to access the boot sector or hard disk partition table, there will be no warning message. | Enabled Disabled |
| USB Beep Message | Select whether to allow the BIOS to emit error beeps or display error messages during USB device enumeration. | Enabled Disabled |

Advanced Chipset Features



| Field | Description | Value |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| AMD Cool 'n' Quiet | Select whether to enable the AMD Cool 'N' Quiet Technology. This technology allows a compliant OS to dynamically adjust the system voltage and core frequency for reduced heat and noise emission. | Enabled Disabled |
| AMD-V | Select whether to enable the AMD-V Technology. This technology allows a single platform to run multiple operating systems in independent partitions. | Enabled Disabled |
| Memory Hole Remapping | When enabled, some or all of the memory between the 2 GB and 4 GB limits to addresses above 4 GB. This is a workaround for the PCI hole or PCI memory hole which is a limitation of 32-bit hardware and 32-bit operating systems that causes a computer to appear to have less memory available than is physically installed. Note: This feature is useful for systems running on 64-bit OS and those 32-bit systems that support the Physical Address Extension method. | Enabled Disabled |
| Primary Video | When a GPU expansion board is installed, you have the option to select which graphics controller to activate. Note: When this field is set to Auto, the graphics controller priority sequence is: PCIE, Onboard, then PCI. | Auto PCIE Onboard PCI |
| UMA Frame Buffer Size | When a GPU expansion board is installed, you can select how the system video memory (frame buffer) is allotted. | Auto 32 MB 64 MB 128 MB 256 MB |

Integrated Peripherals



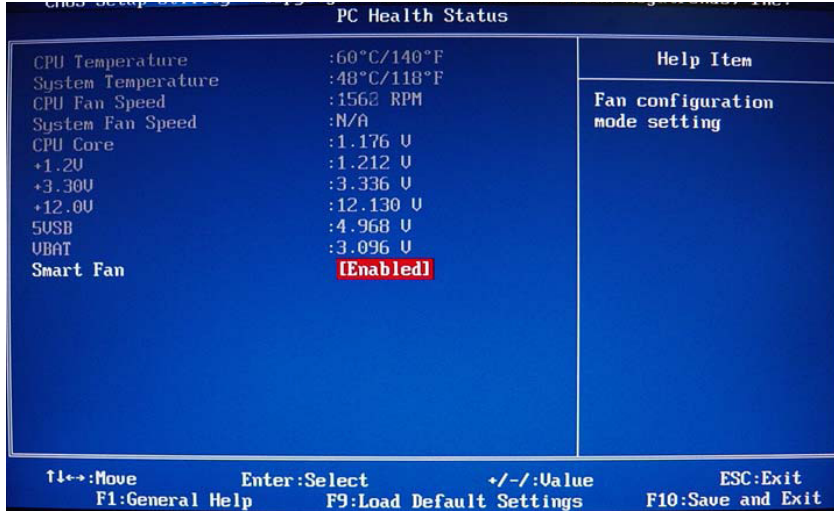
| Field | Description | Value |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| Onboard SATA Controller | Enables or disables the onboard SATA controller. | Enabled Disabled |
| Onboard SATA Mode | Set the operating mode for the onboard SATA controller. | Native IDE |
| Onboard USB Controller | Enables or disables the onboard USB controller. | Enabled Disabled |
| Legacy USB Support | Enables or disables support for a USB mouse and USB keyboard. When enabled, any attached USB mouse or USB keyboard can control the system even when there is no USB driver loaded onto the system. | Enabled Disabled |
| USB Storage Emulation | If set to Auto, a USB devices with a capacity of equal or less than 2 GB will be emulated as a bootable floppy disk. | Auto Floppy Hard Disk |
| Onboard Graphics Controller | Enables or disables the onboard graphics controller. | Enabled Disabled |
| Onboard Audio Controller | Enables or disables the onboard audio controller. | Enabled Disabled |
| Onboard LAN Controller | Enables or disables the onboard LAN controller. | Enabled Disabled |
| Onboard LAN Option ROM | Enables or disables the onboard LAN option ROM function. | Enabled Disabled |

Power Management Setup



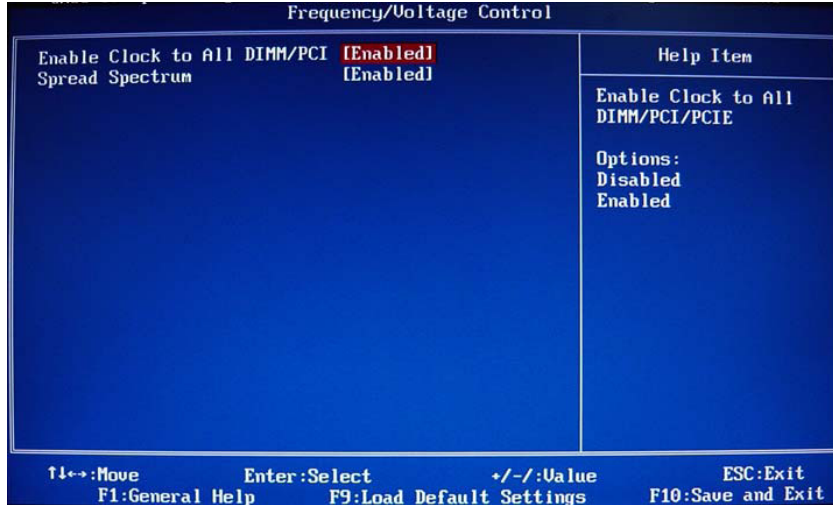
| Field | Description | Value |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| ACPI Suspend Mode | Use this item to define how your system suspends. Default value is S3 (STR), the suspend mode is suspend to RAM, i.e., the system shuts down with the exception of a refresh current to the system memory. | S3 (STR) S1 (POS) |
| Deep Power Off Mode | Enables or disables compliance to the Energy-using Products Lot 6 Directives (EuP Lot 6). | Enabled Disabled |
| Power On by RTC Alarm | Enables or disables the system to wake up from a power-saving mode when an RTC alarm occurs. | Enabled Disabled |
| Power On by PCIE Devices | Enables or disables the system to wake up from a power-saving mode when an event occurs on an installed PCI Express device. | Enabled Disabled |
| Power On by PCI Devices | Enables or disables the system to wake up from a power-saving mode when an event occurs on an installed PCI device. | Enabled Disabled |
| Power On by Modem Ring | Enables or disables the system to wake up from a power-saving mode when a modem signal is received. network message | Enabled Disabled |
| Power On by Onboard LAN | Enables or disables the system to wake up from a power-saving mode when the onboard LAN controller received a network message. | Enabled Disabled |
| Wake Up by PS/2 KB/Mouse | Enables or disables the system to wake up from a power-saving mode when a PS/2 keyboard or mouse is used. | Enabled Disabled |

PC Health Status



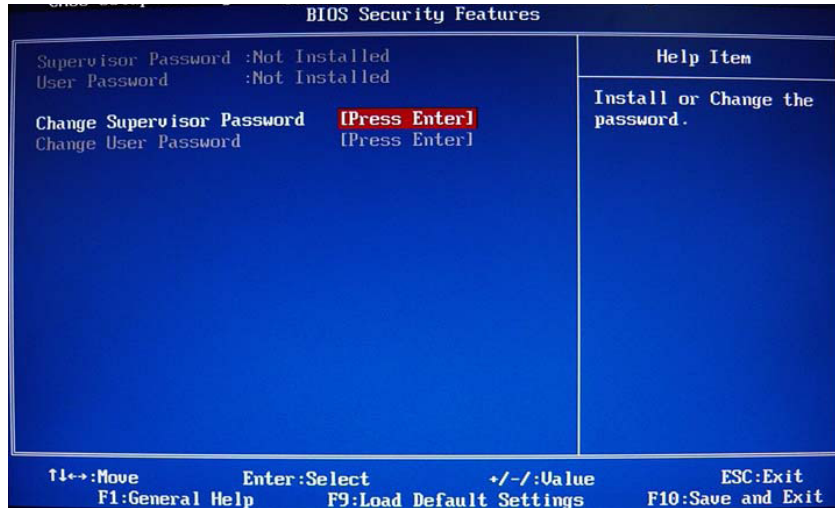
| Field | Description | Value |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------|
| CPU Temperature System Temperature CPU Fan Speed System Fan Speed CPU Core +1.2V +3.30V +5.00V +12.0V 5VSB VBAT | These items lets you monitor the parameters for critical voltages, temperatures and fan speeds. | |

Frequency/Voltage Control



| Field | Description | Value |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Enable Clock to All DIMM/PCI | When enabled, clock signals will be sent to the PCI and memory slots regardless of whether the slot is occupied or not. | Enabled Disabled |
| Spread Spectrum | When the mainboard's clock generator pulses, the extreme values of the pulses creates EMI (electromagnetic interference). Set this field to Enabled to reduce this EMI level. This reduces interference problems with other electronics in the area. Note: Remember to disable the Spread Spectrum feature if you are overclocking. A slight jitter can introduce a temporary boost in clock speed causing the overclocked processor to lock up. | Enabled Disabled |

BIOS Security Features



| Field | Description |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supervisor Password | Displays the supervisor password status. When set to Installed, this password will allow the user to access and change all settings in the Setup Utility. |
| User Password | Displays the user password status. Only the following menus will be accessible when this password is set as Installed: <ul style="list-style-type: none"> • System Date and System Time • Exit Without Saving |
| Change Supervisor Password | Press Enter to change the supervisor password. |

Setting a system password

Note the following before you define a system password:

- The maximum length of password contains 8 alphanumeric characters—A - Z, 0 - 9, and ‘;’ (for French keyboard).
- System passwords are case-insensitive.
- When you are prompted to enter a password, you have three tries before the system halts. Do not forget your password. If you forget your password, you may have to return your computer to your dealer to reset it.

To set a system password:

NOTE You need to set a supervisor password first before setting the user password.

1. Select Change Supervisor Password or Change User Password, then press **Enter**.
The password box appears.
2. Type a password then press **Enter**.

IMPORTANT Be very careful when typing your password because the characters do not appear on the screen. Only shaded blocks representing each typed character are visible.

3. Retype the password to verify the first entry, then press **Enter**.
You will be prompted to save the new password.
4. Press **Enter**.
5. Press **F10** to save the password and close the Setup Utility.

To change a system password:

1. Select Change Supervisor Password or Change User Password, then press **Enter**.
The password box appears.
2. Type the original password, then press **Enter**.
3. Type a new password, then press **Enter**.
4. Retype the new password to verify the first entry, then press **Enter**.
You will be prompted to save the new password.
5. Press **Enter**.
6. Press **F10** to save the password and close the Setup Utility.

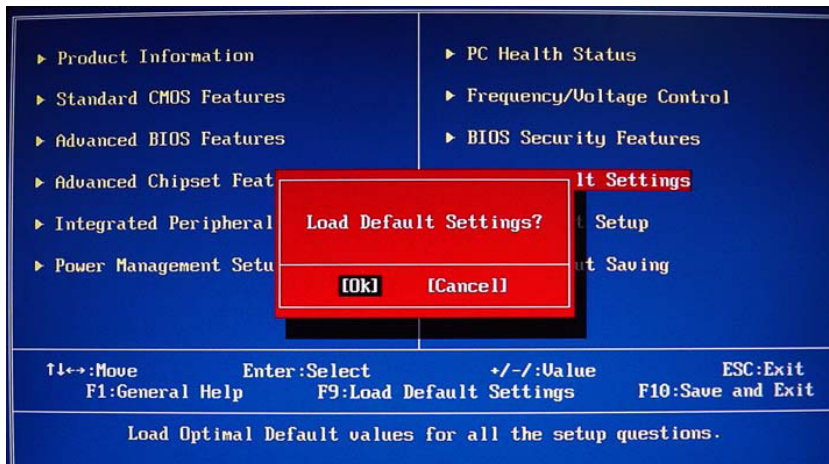
To remove a system password:

NOTE When the supervisor password is removed, the user password will also be remove.

1. Select Change Supervisor Password or Change User Password, then press **Enter**.
The password box appears.
2. Type the original password, then press **Enter**.
3. Press **Enter** twice without entering anything in the new and confirm password fields.
You will be prompted to confirm the password removal.
4. Press **Enter**.
5. Press **F10** to save the changes you made and close the Setup Utility.

Load Default Settings

Execute this menu to load the factory-default settings for all Setup parameters. Keyboard shortcut: F9

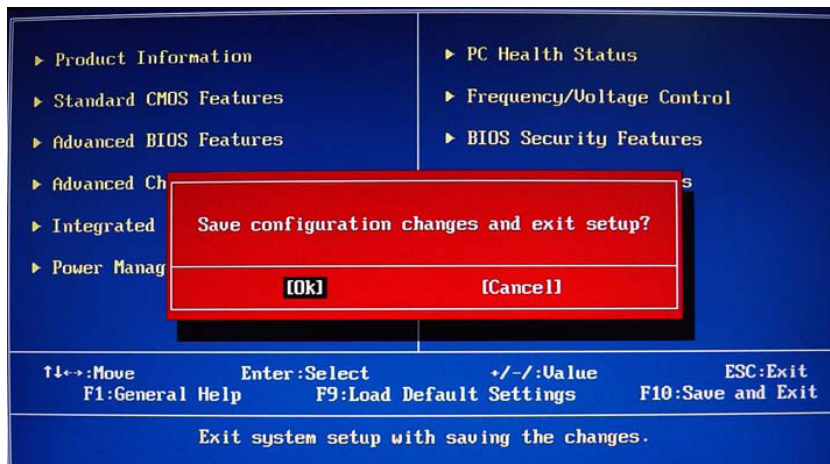


Perform the steps below to load the system default settings:

1. Select **Load Default Settings**, then press **Enter**.
You will be prompted to load the system defaults.
2. Select **OK**, then press **Enter**.
3. Press **F10** to save the changes you made and close the Setup Utility.

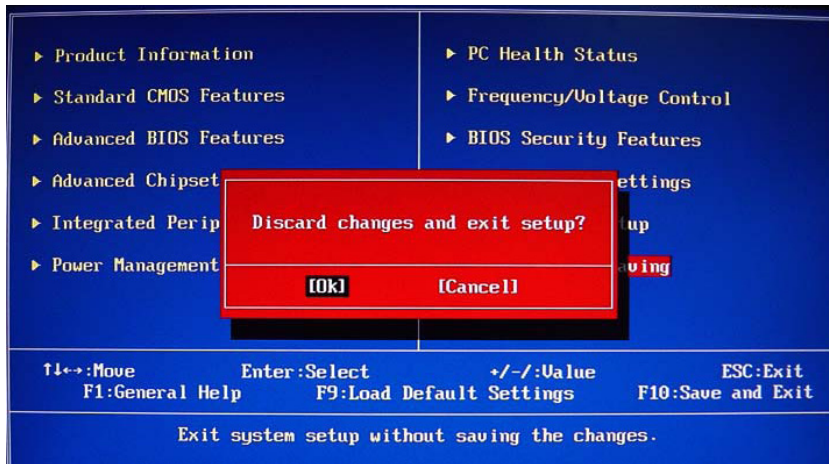
Save & Exit Setup

Execute this menu to save the changes made and closes the Setup Utility. Keyboard shortcut: F10



Exit Without Saving

Execute this menu to closes the Setup Utility without making any changes.



System Disassembly

This chapter provides step-by-step instructions on how to disassemble the computer for maintenance and troubleshooting purposes.

Disassembly Tools

In performing the disassembly process, you will need the following tools:

- Wrist-grounding strap and conductive mat for preventing electrostatic discharge
- Philips screwdriver
- Flat screwdriver

- NOTES**
- To reinstall the system components and assemble the unit, perform the disassembly procedures in reverse.
 - The screws for the different components vary in size. During the disassembly process, group the screws with their corresponding components to avoid mismatches when putting back the components.

Pre-disassembly Procedure

Before proceeding with the disassembly procedure, perform the steps listed below:

1. Make sure that the optical disc drive and the optional card reader slots are empty.
2. Turn off the power to the computer and all peripherals.
3. Unplug the power cord from the computer.
4. Unplug the network cable and all connected peripheral devices from the computer.
5. Place the computer on a flat, steady surface.

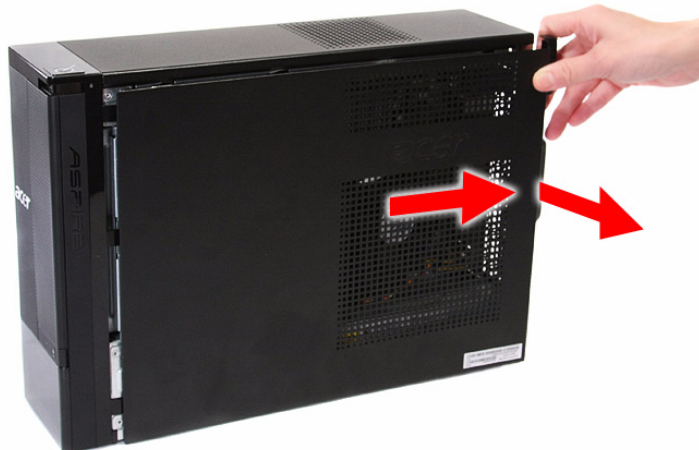
Disassembly Procedures

Removing the Side Panel

1. Remove the two screws located on the rear edge of the side panel.



2. Slide the panel back about 2.5 cm (1.0 in) to release it from the chassis notches, then detach the panel from the chassis.
3. Put the side panel aside for reinstallation later.



Removing the Front Bezel

1. Release the front bezel retention tabs from the chassis interior.



2. Pull the front bezel away from the chassis.

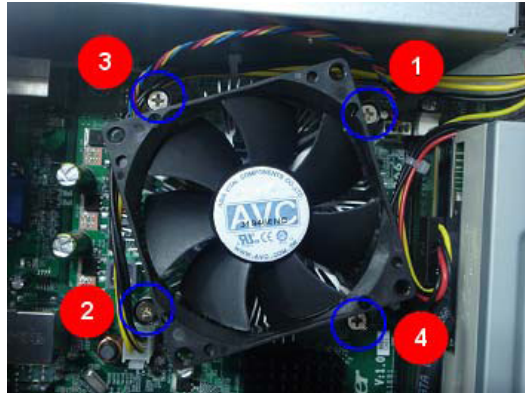


NOTE: The power switch and LED cable from the front bezel is still connected to its connector on the mainboard. To detach the front bezel completely, you have to remove the hard disk and optical drive.

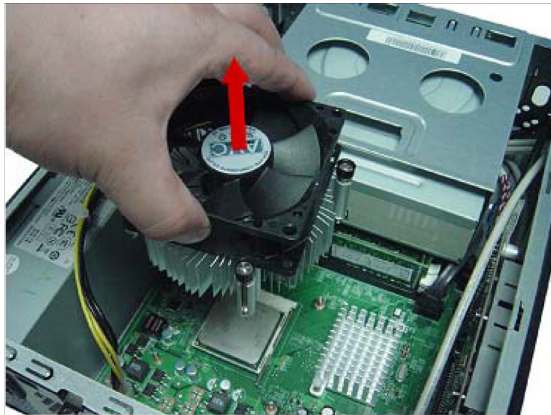
Removing the Heat Sink Fan Assembly

WARNING:The heat sink becomes very hot when the system is on. NEVER touch the heat sink with any metal or with your hands.

1. Use a long-nosed screwdriver to loosen the four screws on the heat sink, in the order as shown below.



2. Lift the heat sink fan assembly away from the mainboard.



3. Lay down the heat sink fan assembly, in an upright position, on top of the optical drive, as shown below, then disconnect the fan cable from the mainboard.



Removing the Processor

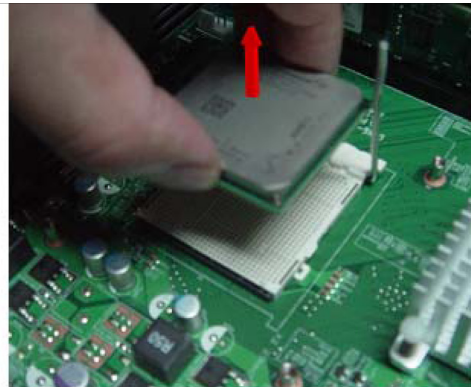
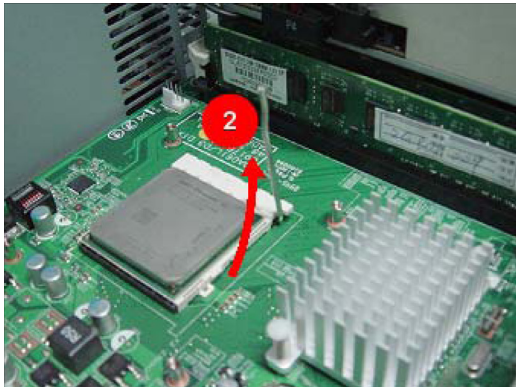
IMPORTANT: Before removing a processor from the mainboard, make sure to create a backup file of all important data.

WARNING: The processor becomes very hot when the system is on. Allow it to cool off first before handling.

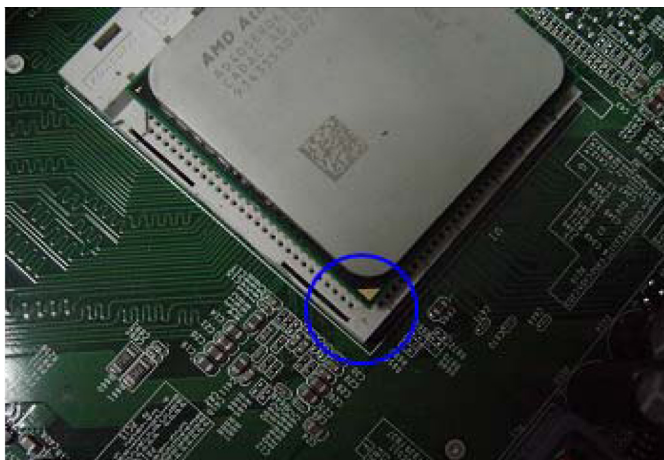
1. Release the load lever (1).



2. Pull the load lever to the fully open, upright position (2).
3. Pull out the processor from the socket.



IMPORTANT: If you are going to install a new processor, note the arrow on the corner to make sure the processor is properly oriented over the socket.



Removing the HDD-ODD Bracket

1. Remove the two screws that secure the HDD-ODD bracket to the chassis.

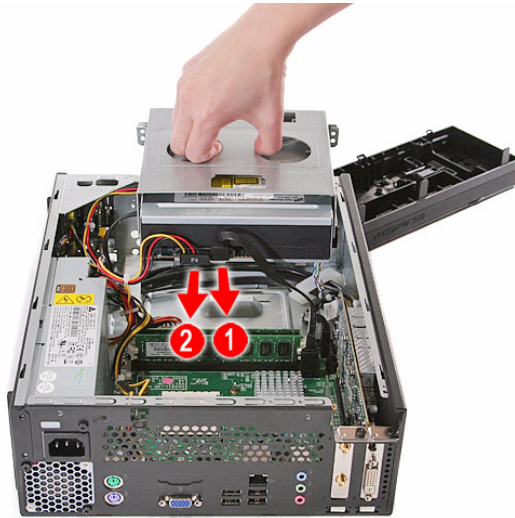


2. Lift the bracket up and turn it over.

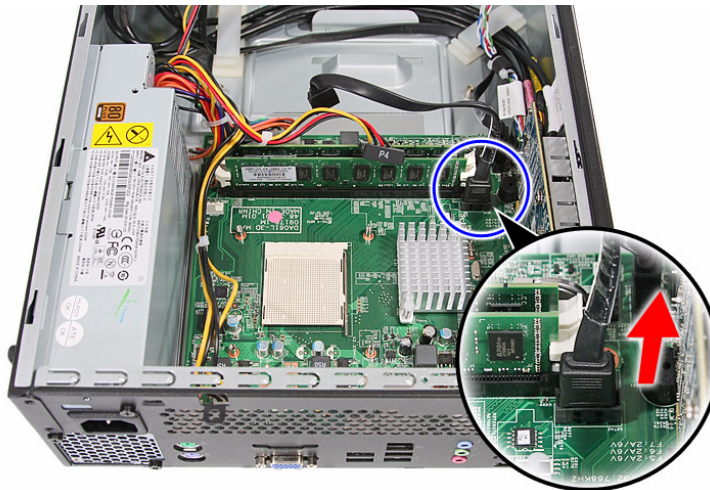


Removing the Optical Drive and the Hard Disk Drive

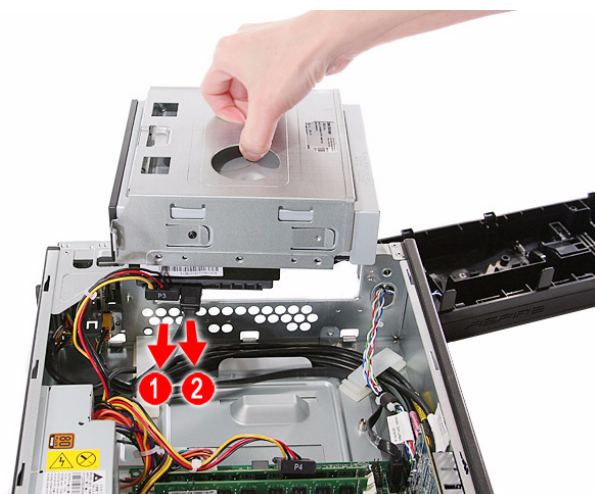
1. Disconnect the SATA and power cables from the rear of the optical drive.



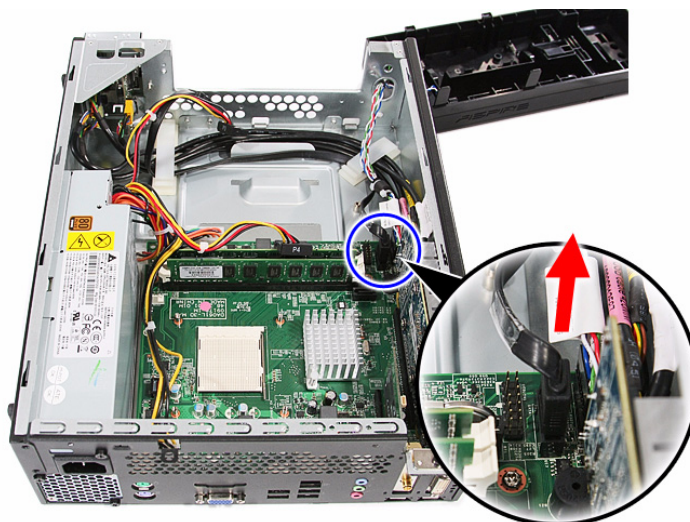
2. Disconnect the other end of the SATA cable from the mainboard.



3. Disconnect the SATA and power cables from the rear of the hard disk drive.



4. Disconnect the other end of the SATA cable from the mainboard.



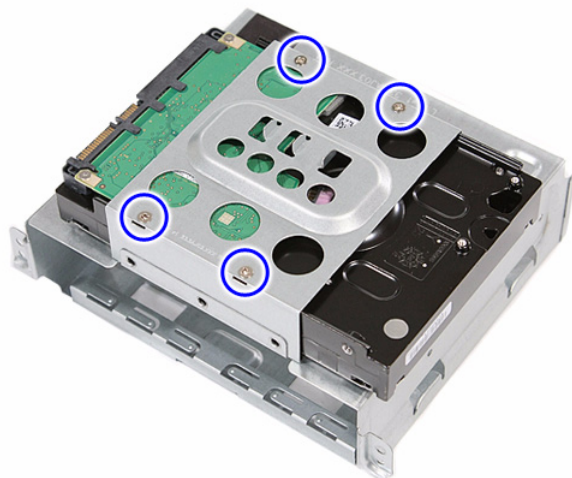
-
5. Remove the screws that secure the optical drive to the HDD-ODD bracket.



6. Pull the optical drive out of the drive bay.



-
7. Remove the four screws that secure the hard disk drive to the HDD bracket.

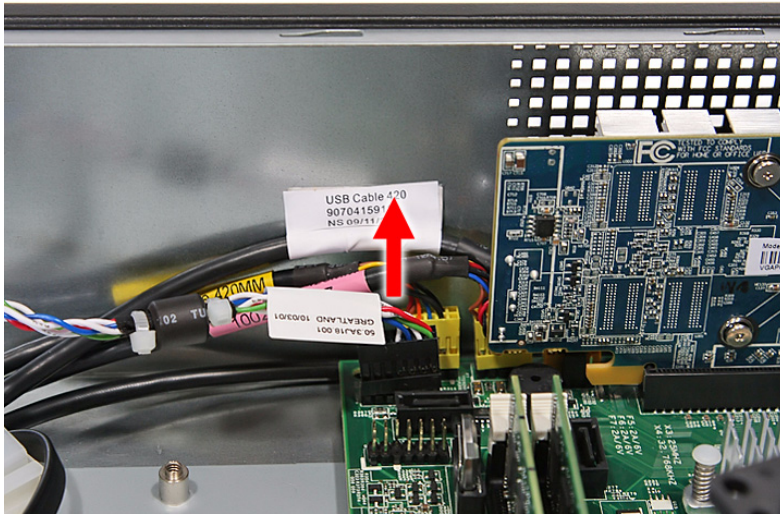


8. Slide the hard disk drive out of the bracket.

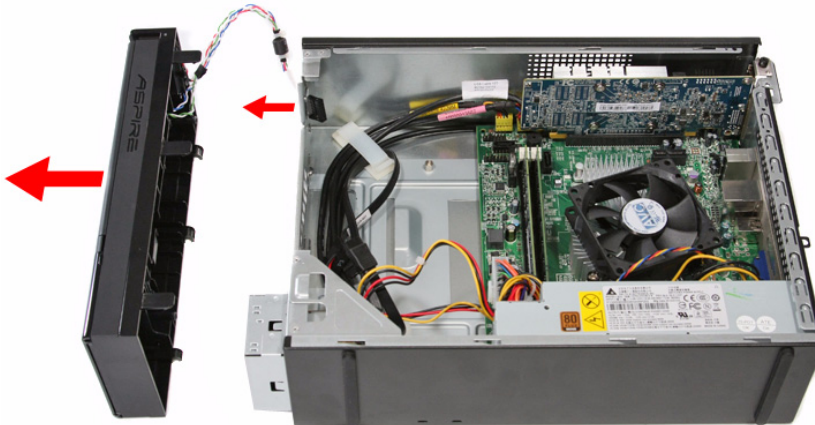


Removing the Front Bezel

1. Disconnect the power button/LED cable from its mainboard connector.



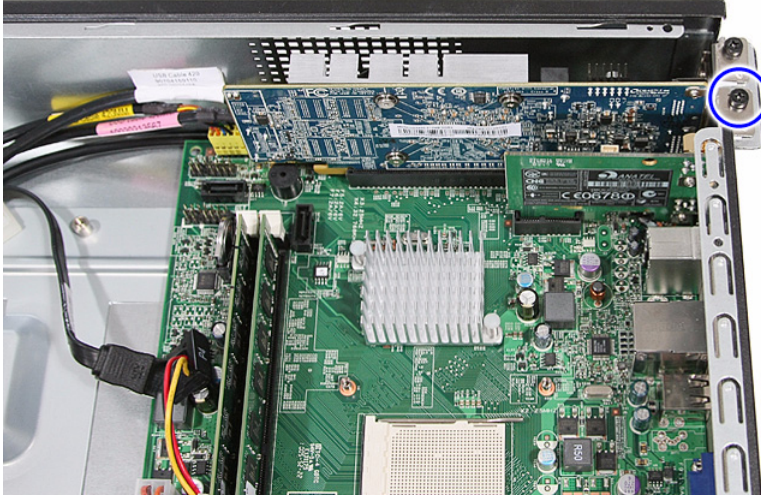
2. Pull out the power button/LED cable from the chassis.



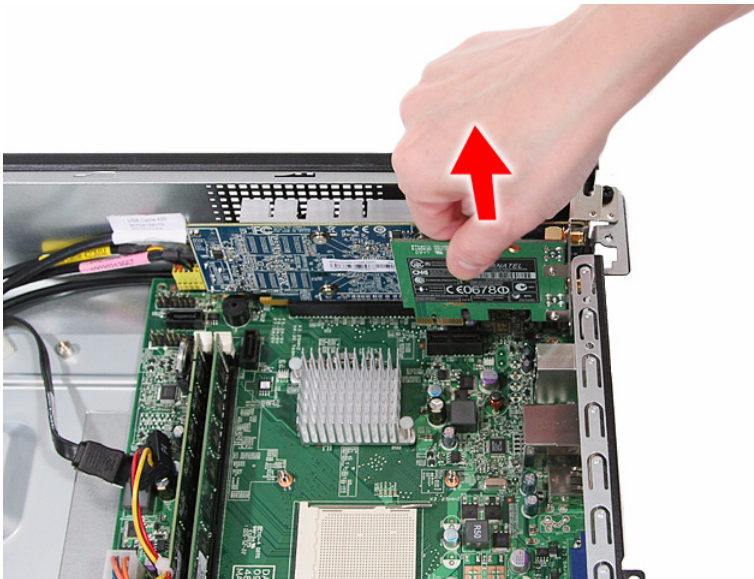
3. Detach the front bezel.

Removing the Expansion Boards

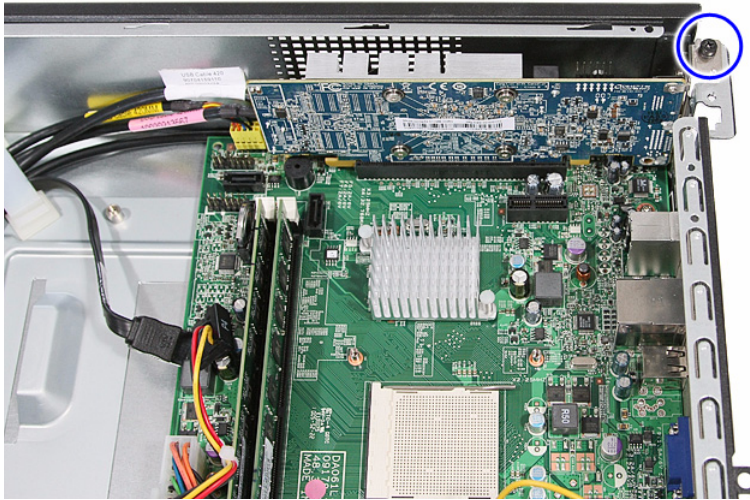
1. Remove the screw from the expansion board bracket opposite the PCIEX2 slot.



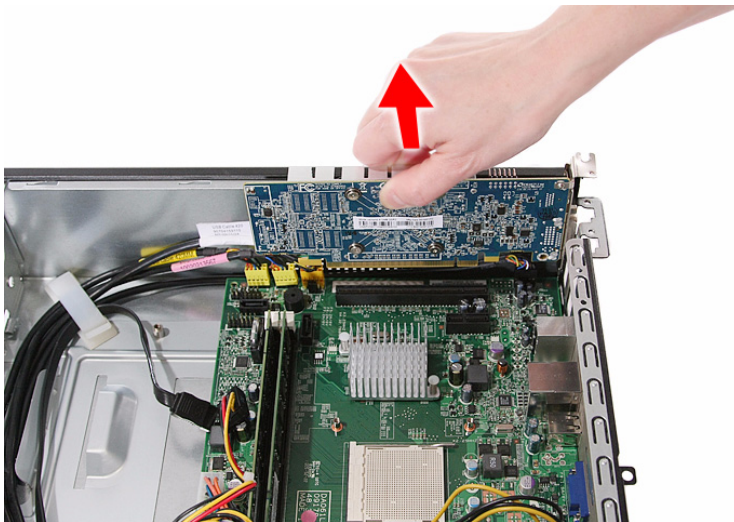
2. Gently pull up the expansion board to remove it from the mainboard.



3. Remove the screw from the expansion board bracket opposite the PCI_1 slot.

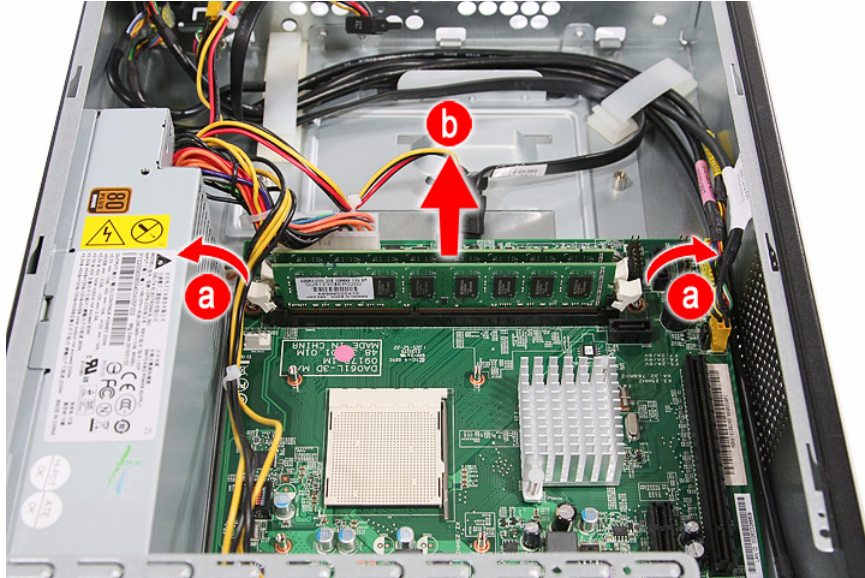


4. Gently pull up the expansion board to remove it from the mainboard.



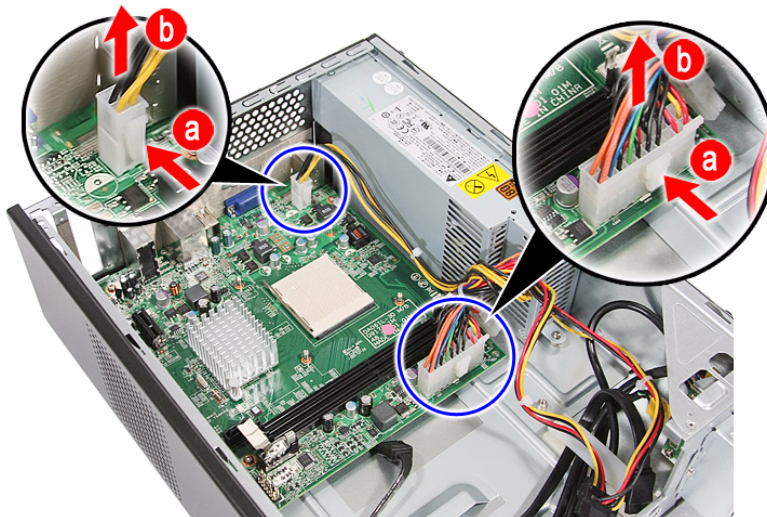
Removing the Memory Modules

1. Open the holding clips (a) securing the memory modules.
2. Gently pull the DIMM upward to pull it away from the chassis (b).



Removing the Power Supply Unit

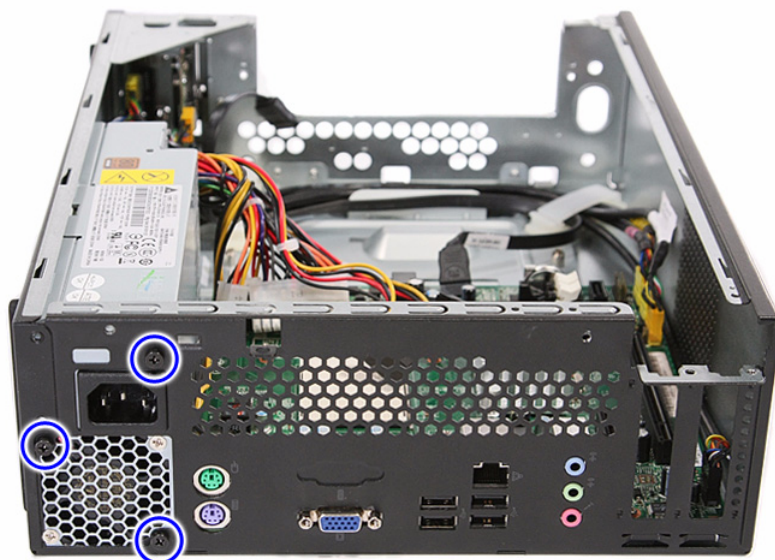
1. Disconnect the 4-pin and the 24-pin ATX power supply cables from its mainboard connector.
 - a. Squeeze on the retaining latch (a) attached to the cable end of the connector.
 - b. Grasp the cable end of the connector and pull it straight up (b).



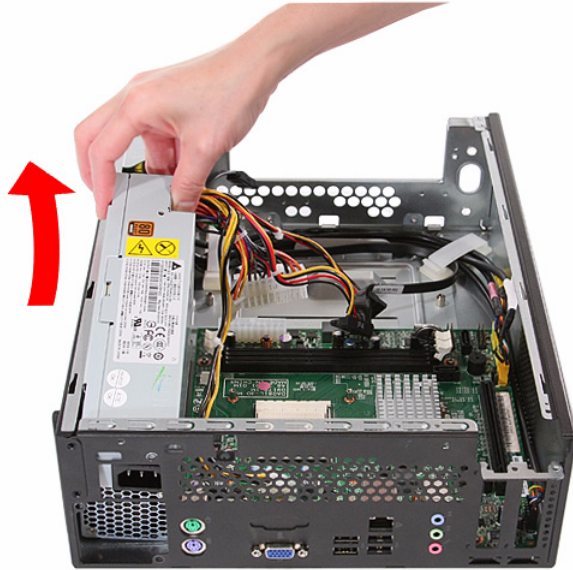
-
2. Remove the screw that secures the power supply to the chassis.



3. Remove the three screws that secure the power supply to the rear panel.



4. Lift the power supply module out of the chassis.

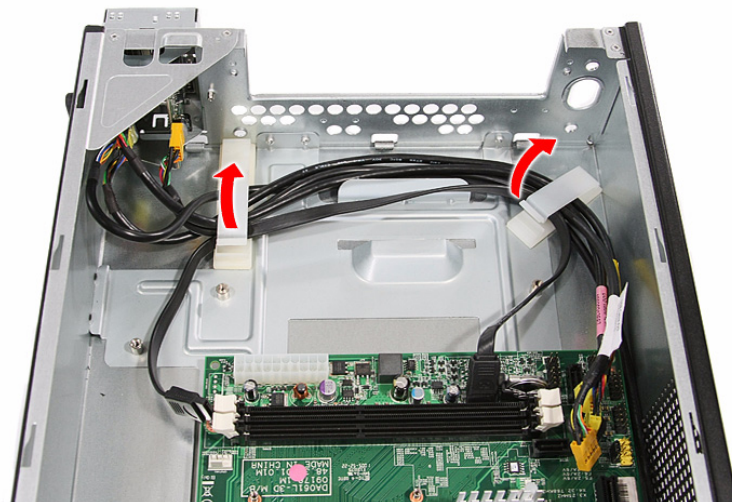


Removing the Front I/O and Optional Card Reader Assemblies

1. Disconnect the front I/O and optional card reader cables from their mainboard connectors.



-
2. Pull up the plastic clips to release the cables.



3. Remove the optional card reader assembly.

- a.** Remove the two screws that secure the optional card reader assembly to the bracket.

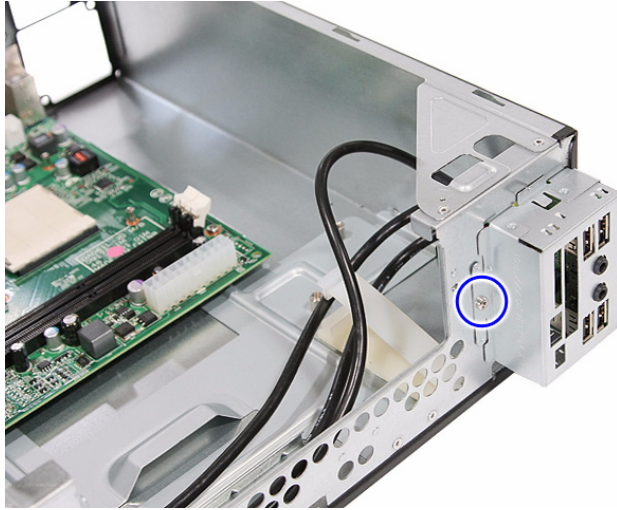


- b.** Pull the optional card reader assembly out of the bracket.



4. Remove the front I/O and optional card reader board bracket.

-
- a. Remove the screw that secures the bracket to the chassis.

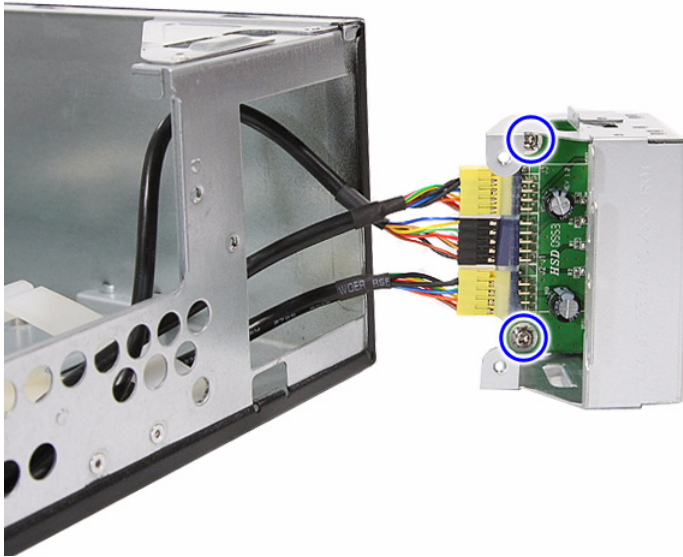


- b. Pull the bracket out the chassis.

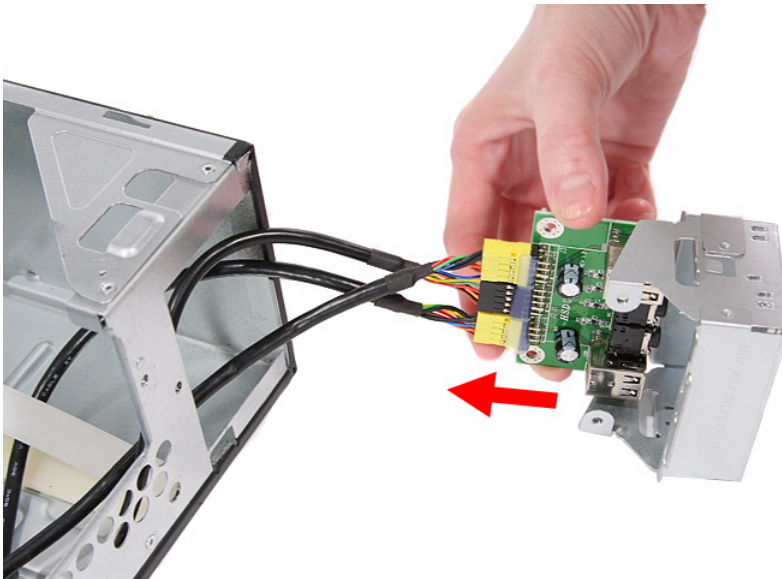


5. Remove the front I/O assembly.

- a. Remove the two screws that secure the front I/O assembly to the bracket.

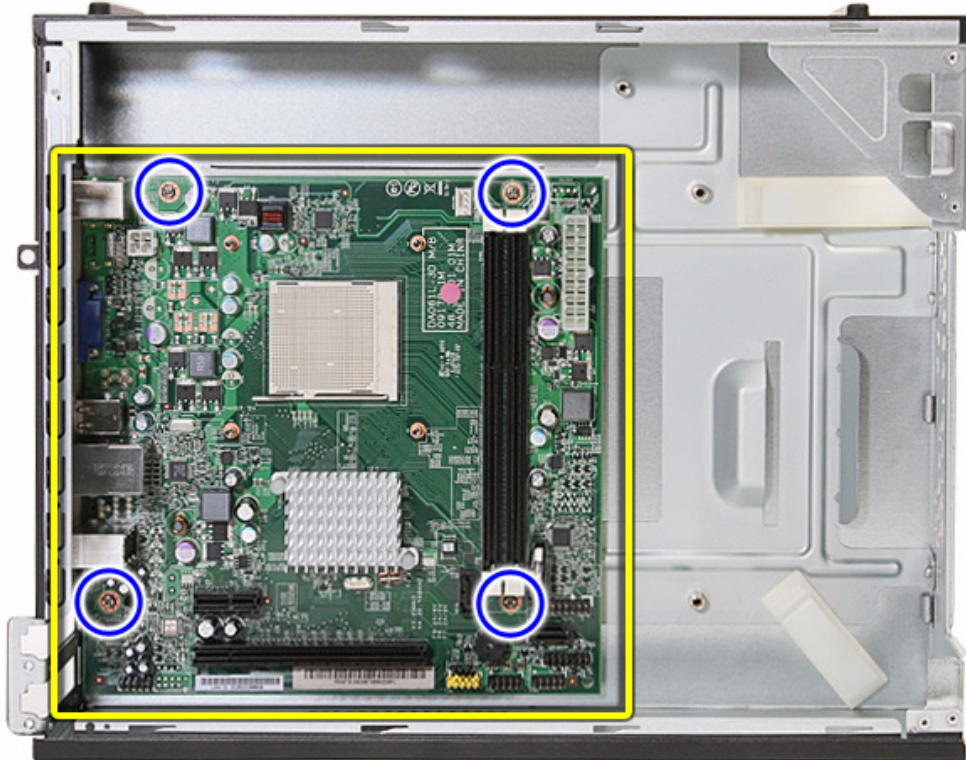


- b. Remove front I/O assembly from the bracket.



Removing the Mainboard

1. Remove the four screws that secure the mainboard to the chassis.

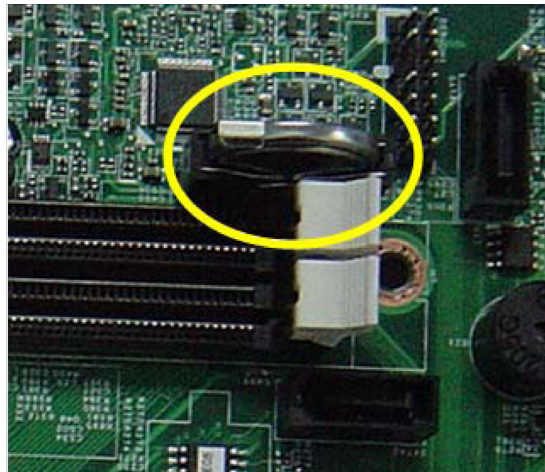


Note: Circuit boards >10 cm² has been highlighted with the yellow rectangle as above image shows. Please detach the Circuit boards and follow local regulations for disposal.

2. Lift the board from the chassis.



3. Remove the RTC battery.



Note: RTC battery has been highlighted with the yellow circle as above image shows. Please detach the RTC battery and follow local regulations for disposal.

Troubleshooting

This chapter lists the POST error indicators and BIOS beep codes, as well general troubleshooting instructions.

Hardware Diagnostic Procedure

1. Obtain as much detail as possible about the symptoms of the system failure.
2. Verify the symptoms by attempting to recreate the failure by running the diagnostic tests or repeating the same operation.
3. Refer to “Power System Check” procedure on the next section and the “Beep Codes” section on page 60 to determine which corrective action to take.

System Check Procedures

IMPORTANT The diagnostic tests described in this chapter are only intended to test Acer products. Non-Acer products, prototype cards, or modified options can give false errors and invalid system responses.

Power System Check

If the system can be powered on, skip this section. Proceed to the “System Internal Inspection” procedure on the next page.

If the system will not power on, do the following:

- Check if the power cable is properly connected to the AC power jack and a functional AC power source.
- Check if the voltage selector switch is set to the correct voltage setting.

System External Inspection

1. Inspect the power and LED indicators on the front panel. Go to “Front View” section on page 4 for the location and description of the LED behaviour.
2. Make sure that the ventilation slots on the rear panel are not blocked.
3. Make sure that there is no point of contact in the system that can cause a power short.

If the cause of the failure is still can not be determined, perform the “System Internal Inspection” procedure described on the next page.

System Internal Inspection

1. Turn off the power to the computer and all peripherals.
2. Unplug the power cord from the computer.
3. Unplug the network cable and all connected peripheral devices from the computer.
4. Place the computer on a flat, steady surface.
5. Remove the side panel as described in page 24.
6. Verify that the processor, memory module(s), and expansion board(s) are properly seated.
7. Verify that all power and data cables are firmly and properly attached to the installed drives.
8. Verify that all cable connections inside the system are firmly and properly attached to their appropriate mainboard connectors.
9. Verify that all components are Acer-qualified and supported.
10. Reinstall the side panel.
11. Power on the system.

If the cause of the failure is still can not be determined, review the POST messages and BIOS checkpoints during the system startup.

Checkpoints

A checkpoint is either a byte or word value output to I/O port 80h. The BIOS outputs checkpoints during bootblock and Power-On Self Test (POST) to indicate the task the system is currently executing. Checkpoints are very useful in aiding software developers or technicians in debugging problems that occur during the pre-boot process.

Viewing BIOS Checkpoints

Viewing all checkpoints generated by the BIOS requires a checkpoint card, also referred to as a POST card or POST diagnostic card. These are ISA or PCI add-in cards that show the value of I/O port 80h on a LED display. Checkpoints may appear on the bottom right corner of the screen during POST. This display method is limited, since it only displays checkpoints that occur after the video card has been activated.

NOTE Please note that checkpoints may differ between different platforms based on system configuration. Checkpoints may change due to vendor requirements, system chipset or option ROMs from add-in PCI devices.

Boot Block Initialization Code Checkpoints

The boot block initialization code sets up the chipset, memory, and other components before system memory is available. The following table describes the type of checkpoints that may occur during the boot block initialization portion of the BIOS.

| Checkpoint | Description |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Before D1 | Early chipset initialization is done. Early super I/O initialization is done including RTC and keyboard controller. NMI is disabled. |
| D1 | Perform keyboard controller BAT test. Check if waking up from power management suspend state. Save power-on CPUID value in scratch CMOS. |
| D0 | Go to flat mode with 4GB limit and GA20 enabled. Verify the bootblock checksum. |
| D2 | Disable CACHE before memory detection. Execute full memory sizing module. Verify that flat mode is enabled. |
| D3 | If memory sizing module not executed, start memory refresh and do memory sizing in bootblock code. Do additional chipset initialization. Re-enable CACHE. Verify that flat mode is enabled. |
| D4 | Test base 512 KB memory. Adjust policies and cache first 8 MB. Set stack. |

| Checkpoint | Description |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D5 | Bootblock code is copied from ROM to lower system memory and control is given to it. BIOS now executes out of RAM. |
| D6 | Both key sequence and OEM specific method is checked to determine if BIOS recovery is forced. Main BIOS checksum is tested. If BIOS recovery is necessary, control flows to checkpoint E0. See the "Boot Block Recovery Code Checkpoints" section for more information. |
| D7 | Restore CPUID value back into register. The Bootblock Runtime interface module is moved to system memory and control is given to it. Determine whether to execute serial flash. |
| D8 | The Runtime module is uncompressed into memory. CPUID information is stored in memory. |
| D9 | Store the Uncompressed pointer for future use in PMM. Copying Main BIOS into memory. Leaves all RAM below 1 MB Read-Write including E000 and F000 shadow areas but closing SMRAM. |
| DA | Restore CPUID value back into register. Give control to BIOS POST (ExecutePOSTKernel). See the "POST Code Checkpoints" section for more information. |

Boot Block Recovery Code Checkpoints

The boot block recovery code gets control when the BIOS determines that a BIOS recovery is required because the user has forced the update or the BIOS checksum is corrupt. Refer to "BIOS Recovery" section on page 61 for more information. The following table describes the type of checkpoints that may occur during the boot block recovery portion of the BIOS.

| Checkpoint | Description |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| E0 | Initialize the floppy controller in the super I/O. Some interrupt vectors are initialized. DMA controller is initialized. 8259 interrupt controller is initialized. L1 cache is enabled. |
| E9 | Set up floppy controller and data. Attempt to read from floppy. |
| EA | Enable ATAPI hardware. Attempt to read from ARMD and ATAPI CDROM. |
| EB | Disable ATAPI hardware. Jump back to checkpoint E9. |
| EF | Read error occurred on media. Jump back to checkpoint EB. |
| E9 or EA | Determine information about root directory of recovery media. |
| F0 | Search for pre-defined recovery file name in root directory. |
| F1 | Recovery file not found. |
| F2 | Start reading FAT table and analyze FAT to find the clusters occupied by the recovery file. |
| F3 | Start reading the recovery file cluster by cluster. |
| F5 | Disable L1 cache. |
| FA | Check the validity of the recovery file configuration to the current configuration of the flash part. |
| FB | Make flash write enabled through chipset and OEM specific method. Detect proper flash part. Verify that the found flash part size equals the recovery file size. |
| F4 | The recovery file size does not equal the found flash part size. |
| FC | Erase the flash part. |
| FD | Program the flash part. |
| FF | The flash has been updated successfully. Make flash write disabled. Disable ATAPI hardware. Restore CPUID value back into register. Give control to F000 ROM at F000:FFF0h. |

POST Code Checkpoints

The POST code checkpoints are the largest set of checkpoints during the BIOS preboot process. The following table describes the type of checkpoints that may occur during the POST portion of the BIOS.

| Checkpoint | Description |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 03 | Disable NMI, Parity, video for EGA, and DMA controllers. Initialize BIOS, POST, Runtime data area. Also initialize BIOS modules on POST entry and GPNV area. Initialized CMOS as mentioned in the Kernel Variable "wCMOSFlags." |
| 04 | Check CMOS diagnostic byte to determine if battery power is OK and CMOS checksum is OK. Verify CMOS checksum manually by reading storage area. If the CMOS checksum is bad, update CMOS with power-on default values and clear passwords. Initialize status register A. Initializes data variables that are based on CMOS setup questions. Initializes both the 8259 compatible PICs in the system |
| 05 | Initializes the interrupt controlling hardware (generally PIC) and interrupt vector table. |
| 06 | Do R/W test to CH-2 count reg. Initialize CH-0 as system timer. Install the POSTINT1Ch handler. Enable IRQ-0 in PIC for system timer interrupt. Traps INT1Ch vector to "POSTINT1ChHandlerBlock." |
| 08 | Initializes the CPU. The BAT test is being done on KBC. Program the keyboard controller command byte is being done after Auto detection of KB/MS using AMI KB-5. |
| 0A | Initializes the 8042 compatible Key Board Controller. |
| 0B | Detects the presence of PS/2 mouse. |
| 0C | Detects the presence of Keyboard in KBC port. |
| 0E | Testing and initialization of different Input Devices. Also, update the Kernel Variables. Traps the INT09h vector, so that the POST INT09h handler gets control for IRQ1. Uncompress all available language, BIOS logo, and Silent logo modules. |
| 13 | Early POST initialization of chipset registers. |
| 24 | Uncompress and initialize any platform specific BIOS modules. GPNV is initialized at this checkpoint. |
| 30 | Initialize System Management Interrupt. |
| 2A | Initializes different devices through DIM. See DIM Code Checkpoints section for more information. |
| 2C | Initializes different devices. Detects and initializes the video adapter installed in the system that have optional ROMs. |
| 2E | Initializes all the output devices. |
| 31 | Allocate memory for ADM module and uncompress it. Give control to ADM module for initialization. Initialize language and font modules for ADM. Activate ADM module. |
| 33 | Initializes the silent boot module. Set the window for displaying text information. |
| 37 | Displaying sign-on message, CPU information, setup key message, and any OEM specific information. |
| 38 | Initializes different devices through DIM. See DIM Code Checkpoints section for more information. USB controllers are initialized at this point. |
| 39 | Initializes DMAC-1 & DMAC-2. |
| 3A | Initialize RTC date/time. |
| 3B | Test for total memory installed in the system. Also, Check for DEL or ESC keys to limit memory test. Display total memory in the system. |

| Checkpoint | Description |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3C | Mid POST initialization of chipset registers. |
| 40 | Detect different devices (Parallel ports, serial ports, and coprocessor in CPU, ... etc.) successfully installed in the system and update the BDA, EBDA...etc. |
| 50 | Programming the memory hole or any kind of implementation that needs an adjustment in system RAM size if needed. |
| 52 | Updates CMOS memory size from memory found in memory test. Allocates memory for Extended BIOS Data Area from base memory. Programming the memory hole or any kind of implementation that needs an adjustment in system RAM size if needed. |
| 60 | Initializes Num-Lock status and programs the KBD typematic rate. |
| 75 | Initialize Int-13 and prepare for IPL detection. |
| 78 | Initializes IPL devices controlled by BIOS and option ROMs. |
| 7A | Initializes remaining option ROMs. |
| 7C | Generate and write contents of ESCD in NVRam. |
| 84 | Log errors encountered during POST. |
| 85 | Display errors to the user and gets the user response for error. |
| 87 | Execute BIOS setup if needed / requested. Check boot password if installed. |
| 8C | Late POST initialization of chipset registers. |
| 8E | Program the peripheral parameters. Enable/Disable NMI as selected. |
| 90 | Late POST initialization of system management interrupt. |
| A0 | Check boot password if installed. |
| A1 | Clean-up work needed before booting to OS. |
| A2 | Takes care of runtime image preparation for different BIOS modules. Fill the free area in F000h segment with 0FFh. Initializes the Microsoft IRQ Routing Table. Prepares the runtime language module. Disables the system configuration display if needed. |
| A4 | Initialize runtime language module. Display boot option popup menu. |
| A7 | Displays the system configuration screen if enabled. Initialize the CPU's before boot, which includes the programming of the MTRR's. |
| A8 | Prepare CPU for OS boot including final MTRR values. |
| A9 | Wait for user input at config display if needed. |
| AA | Uninstall POST INT1Ch vector and INT09h vector. Deinitializes the ADM module. |
| AB | Prepare BBS for Int 19 boot. |
| AC | End of POST initialization of chipset registers. |
| B1 | Save system context for ACPI. |
| 00 | Passes control to OS Loader (typically INT19h). |

DIM Code Checkpoints

The Device Initialization Manager (DIM) gets control at various times during BIOS POST to initialize different system busses. The following table describes the main checkpoints where the DIM module is accessed.

| Checkpoint | Description |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2A | Initialize different buses and perform the following functions: Reset, Detect, and Disable (function 0); Static Device Initialization (function 1); Boot Output Device Initialization (function 2). Function 0 disables all device nodes, PCI devices, and PnP ISA cards. It also assigns PCI bus numbers. Function 1 initializes all static devices that include manual configured onboard peripherals, memory and I/O decode windows in PCI-PCI bridges, and noncompliant PCI devices. Static resources are also reserved. Function 2 searches for and initializes any PnP, PCI, or AGP video devices. |
| 38 | Initialize different buses and perform the following functions: Boot Input Device Initialization (function 3); IPL Device Initialization (function 4); General Device Initialization (function 5). Function 3 searches for and configures PCI input devices and detects if system has standard keyboard controller. Function 4 searches for and configures all PnP and PCI boot devices. Function 5 configures all onboard peripherals that are set to an automatic configuration and configures all remaining PnP and PCI devices. |

POST Error Indicators

When a system error is detected during POST (Power On Self Text), the Setup utility will switch to diagnostic mode and will either:

- Displays a POST error message, or
- Emits a series of beep codes

POST Error Messages

POST error messages tell users what failure the system has detected. Some error messages could be related to a hardware device. Others may indicate a problem with a device configuration. In some cases an error message may include recommendations for troubleshooting or require that you press the **Enter** key to display recommendations. Follow the instructions on the screen. It is recommended that you correct the error before proceeding, even if the computer appears to boot successfully.

IMPORTANT If your system fails after you make changes in the Setup menus, reboot the computer, enter Setup again and load Setup defaults to correct the error.

Memory

| Message | Description |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gate20 Error | The BIOS is unable to properly control the mainboard's Gate A20 function, which controls access of memory over 1 MB. This may indicate a problem with the mainboard. |
| Multi-Bit ECC Error | This message will only occur on systems using ECC enabled memory modules. ECC memory has the ability to correct single-bit errors that may occur from faulty memory modules. A multiple bit corruption of memory has occurred, and the ECC memory algorithm cannot correct it. This may indicate a defective memory module. |
| Parity Error | Fatal Memory Parity Error. System halts after displaying this message. |
| RAM R/W test failed | This message is displayed by the AMIBIOS8 when the RAM read/write test fails. |
| CMOS Memory Size Wrong | The base memory (memory below 1MB) size that is reported in the CMOS (offset 15h) mismatches with the actual size detected. This condition may occur when the hole is set at 512K base memory or when CMOS is corrupted. |

Boot

| Message | Description |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Boot Failure... | This is a generic message indicating the BIOS could not boot from a particular device. This message is usually followed by other information concerning the device. |
| Invalid Boot Diskette | A diskette was found in the drive, but it is not configured as a bootable diskette. |
| Drive Not Ready | The BIOS was unable to access the drive because it indicated it was not ready for data transfer. This is often reported by drives when no media is present. |
| A: Drive Error | The BIOS attempted to configure the A: drive during POST, but was unable to properly configure the device. This may be due to a bad cable or faulty diskette drive. |
| B: Drive Error | The BIOS attempted to configure the B: drive during POST, but was unable to properly configure the device. This may be due to a bad cable or faulty diskette drive. |
| Insert BOOT diskette in A: | The BIOS attempted to boot from the A: drive, but could not find a proper boot diskette. Reboot and Select proper Boot device or Insert Boot Media in selected Boot device BIOS could not find a bootable device in the system and/or removable media drive does not contain media. |
| Reboot and select proper boot device or Insert boot media in selected boot device | BIOS could not find a bootable device in the system and/or removable media drive does not contain media. |
| NO ROM BASIC | This message occurs on some systems when no bootable device can be detected. |

Storage Device

| Message | Description |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Primary Master Hard Disk Error | The IDE/ATAPI device configured as Primary Master could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| Primary Slave Hard Disk Error | The IDE/ATAPI device configured as Primary Slave could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| Secondary Master Hard Disk Error | The IDE/ATAPI device configured as Secondary Master could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| Secondary Slave Hard Disk Error | The IDE/ATAPI device configured as Secondary Slave could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| 3rd Master Hard Disk Error | The IDE/ATAPI device configured as Master in the 3rd IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| 3rd Slave Hard Disk Error | The IDE/ATAPI device configured as Slave in the 3rd IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| 4th Master Hard Disk Error | The IDE/ATAPI device configured as Master in the 4th IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| 4th Slave Hard Disk Error | The IDE/ATAPI device configured as Slave in the 4th IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| 5th Master Hard Disk Error | The IDE/ATAPI device configured as Master in the 5th IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| 5th Slave Hard Disk Error | The IDE/ATAPI device configured as Slave in the 5th IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| 6th Master Hard Disk Error | The IDE/ATAPI device configured as Master in the 6th IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| 6th Slave Hard Disk Error | The IDE/ATAPI device configured as Slave in the 6th IDE controller could not be properly initialized by the BIOS. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| Primary Master Drive - ATAPI Incompatible | The IDE/ATAPI device configured as Primary Master failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| Primary Slave Drive - ATAPI Incompatible | The IDE/ATAPI device configured as Primary Slave failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| Secondary Master Drive - ATAPI Incompatible | The IDE/ATAPI device configured as Secondary Master failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| Secondary Slave Drive - ATAPI Incompatible | The IDE/ATAPI device configured as Secondary Slave failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| 3rd Master Drive - ATAPI Incompatible | The IDE/ATAPI device configured as Master in the 3rd IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |

| Message | Description |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3rd Slave Drive - ATAPI Incompatible | The IDE/ATAPI device configured as Slave in the 3rd IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| 4th Master Drive - ATAPI Incompatible | The IDE/ATAPI device configured as Master in the 4th IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| 4th Slave Drive - ATAPI Incompatible | The IDE/ATAPI device configured as Slave in the 4th IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| 5th Master Drive - ATAPI Incompatible | The IDE/ATAPI device configured as Master in the 5th IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| 5th Slave Drive - ATAPI Incompatible | The IDE/ATAPI device configured as Slave in the 5th IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| 6th Master Drive - ATAPI Incompatible | The IDE/ATAPI device configured as Master in the 6th IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| 6th Slave Drive - ATAPI Incompatible | The IDE/ATAPI device configured as Slave in the 6th IDE controller failed an ATAPI compatibility test. This message is typically displayed when the BIOS is trying to detect and configure IDE/ATAPI devices in POST. |
| S.M.A.R.T. Capable but Command Failed | The BIOS tried to send a S.M.A.R.T. message to a hard disk, but the command transaction failed. This message can be reported by an ATAPI device using the S.M.A.R.T. error reporting standard. S.M.A.R.T. failure messages may indicate the need to replace the hard disk. |
| S.M.A.R.T. Command Failed | The BIOS tried to send a S.M.A.R.T. message to a hard disk, but the command transaction failed. This message can be reported by an ATAPI device using the S.M.A.R.T. error reporting standard. S.M.A.R.T. failure messages may indicate the need to replace the hard disk. |
| S.M.A.R.T. Status BAD, Backup and Replace | A S.M.A.R.T. capable hard disk sends this message when it detects an imminent failure. This message can be reported by an ATAPI device using the S.M.A.R.T. error reporting standard. S.M.A.R.T. failure messages may indicate the need to replace the hard disk. |
| S.M.A.R.T. Capable and Status BAD | A S.M.A.R.T. capable hard disk sends this message when it detects an imminent failure. This message can be reported by an ATAPI device using the S.M.A.R.T. error reporting standard. S.M.A.R.T. failure messages may indicate the need to replace the hard disk. |

Virus-related

| Message | Description |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BootSector Write!! | The BIOS has detected software attempting to write to a drive's boot sector. This is flagged as possible virus activity. This message will only be displayed if Virus Detection is enabled in AMIBIOS setup. |
| VIRUS: Continue (Y/N)? | If the BIOS detects possible virus activity, it will prompt the user. This message will only be displayed if Virus Detection is enabled in AMIBIOS setup. |

System Configuration

| Message | Description |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DMA-1 Error | Error initializing primary DMA controller. This is a fatal error, often indication a problem with system hardware. |
| DMA-2 Error | Error initializing secondary DMA controller. This is a fatal error, often indication a problem with system hardware. |
| DMA Controller Error | POST error while trying to initialize the DMA controller. This is a fatal error, often indication a problem with system hardware. |
| Checking NVRAM... Update Failed | BIOS could not write to the NVRAM block. This message appears when the FLASH part is write-protected or if there is no FLASH part (System uses a PROM or EPROM). |
| Microcode Error | BIOS could not find or load the CPU Microcode Update to the CPU. This message only applies to INTEL CPUs. The message is most likely to appear when a brand new CPU is installed in a mainboard with an outdated BIOS. In this case, the BIOS must be updated to include the Microcode Update for the new CPU. |
| NVRAM Checksum Bad, NVRAM Cleared | There was an error in while validating the NVRAM data. This causes POST to clear the NVRAM data. |
| Resource Conflict | More than one system device is trying to use the same non-shareable resources (Memory or I/O). |
| NVRAM Ignored | The NVRAM data used to store Plug'n'Play (PnP) data was not used for system configuration in POST. |
| NVRAM Bad | The NVRAM data used to store Plug'n'Play (PnP) data was not used for system configuration in POST due to a data error. |
| Static Resource Conflict | Two or more Static Devices are trying to use the same resource space (usually Memory or I/O). |
| PCI I/O conflict | A PCI adapter generated an I/O resource conflict when configured by BIOS POST. |
| PCI ROM conflict | A PCI adapter generated an I/O resource conflict when configured by BIOS POST. |
| PCI IRQ conflict | A PCI adapter generated an I/O resource conflict when configured by BIOS POST. |
| PCI IRQ routing table error | BIOS POST (DIM code) found a PCI device in the system but was unable to figure out how to route an IRQ to the device. Usually this error is causing by an incomplete description of the PCI Interrupt Routing of the system. |
| Timer Error | Indicates an error while programming the count register of channel 2 of the 8254 timer. This may indicate a problem with system hardware. |
| Refresh timer test failed | BIOS POST found that the refresh timer hardware failed to pass the Refresh Retrace Test. |
| Interrupt Controller-1 error | BIOS POST could not initialize the Master Interrupt Controller. This may indicate a problem with system hardware. |
| Interrupt Controller-2 error | BIOS POST could not initialize the Slave Interrupt Controller. This may indicate a problem with system hardware. |

CMOS

| Message Displayed | Description |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CMOS Date/Time Not Set | The CMOS date and/or time are invalid. This error can be resolved by readjusting the system time in AMIBIOS Setup. |
| CMOS Battery Low | CMOS battery is low. This message usually indicates that the CMOS battery needs to be replaced. It could also appear when the user intentionally discharges the CMOS battery. |
| CMOS Settings Wrong | CMOS settings are invalid. This error can be resolved by using AMIBIOS Setup. |
| CMOS Checksum Bad | CMOS contents failed the Checksum check. Indicates that the CMOS data has been changed by a program other than the BIOS or that the CMOS is not retaining its data due to malfunction. This error can typically be resolved by using AMIBIOS Setup. |

Miscellaneous

| Message Displayed | Description |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| KBC BAT Test failed | Keyboard controller BAT test failed. This may indicate a problem with keyboard controller initialization. |
| Keyboard Error | Keyboard is not present or the hardware is not responding when the keyboard controller is initialized. |
| PS/2 Keyboard not found | PS/2 keyboard support is enabled in the BIOS setup but the device is not detected. |
| PS/2 Mouse not found | PS/2 mouse support is enabled in the BIOS setup but the device is not detected. |
| Keyboard/Interface Error | Keyboard controller failure. This may indicate a problem with system hardware. |
| Unlock Keyboard | PS/2 keyboard is locked. User needs to unlock the keyboard to continue the BIOS POST. |
| System Halted | The system has been halted. A reset or power cycle is required to reboot the machine. This message appears after a fatal error has been detected. |
| <INS> Pressed | Indicates that <INS> key is pressed during the BIOS POST. The POST will load and use default CMOS settings. |
| Password check failed | The password entered does not match the password set in the setup. This condition may occur for both Supervisor and User password verification. |
| Unknown BIOS error. Error code = 004Ah | This message is displayed when ADM module is not present in the AMIBIOS8 ROM. |
| Unknown BIOS error. Error code = 004Bh | This message is displayed when language module is not present in the AMIBIOS8 ROM. |
| Floppy Controller Failure | Error in initializing legacy Floppy Controller. |

Index of Symptom-to-FRU Error Messages

To use the information in this section to diagnose a problem:

1. Find the error symptom in the left column.
2. If directed to a check procedure, replace the FRU indicated in the check procedure.
If no check procedure is indicated, the first Action/FRU item listed in the right column is the most likely cause.

NOTE If you cannot find a symptom or an error in this list and the problem remains, see “Undetermined Problems” on page 65.

Processor/Processor Fan-related Symptoms

| Symptom/Error | Action/FRU |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Processor fan does not run but power supply fan runs. | <ul style="list-style-type: none">• Ensure the system is not in power saving mode.• With the system powered on, measure the voltage of the processor fan connector. Its reading should be +12Vdc. If the reading shows normal, but the fan still does not work, then replace the heat sink fan.• Mainboard |
| Processor test failed. | <ul style="list-style-type: none">• Processor• Mainboard |

NOTE Normally, the processor fan should be operative, and the processor clock setting should be exactly set to match its speed requirement before diagnosing any processor problems.

Mainboard and Memory-related Symptoms

| Symptom/Error | Action/FRU |
|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Memory test failed. | <ul style="list-style-type: none">• Memory module• Mainboard |
| Incorrect memory size shown or repeated during POST. | <ul style="list-style-type: none">• Insert the memory modules in the DIMM sockets properly, then reboot the system.• Memory module• Mainboard |
| System works but fails to enter power saving mode when the Power Management Mode is set to Enabled. | <ul style="list-style-type: none">• Enter CMOS Setup and load the default settings. In Windows systems, check settings in Power Management Property of the Control Panel.• Reload software from Recovery CD. |
| Blinking cursor only; system does not work. | <ul style="list-style-type: none">• IDE drive connection/cables• IDE disk drives• See “Undetermined Problems”.• Mainboard |

NOTE Ensure the memory modules are installed properly and the contact leads are clean before diagnosing any system problems.

Hard Disk Drive-related Symptoms

| Symptom/Error | Action/FRU |
|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hard disk drive test failed. | <ul style="list-style-type: none"> • Enter CMOS Setup and load the default settings. • Hard disk drive cable • Hard disk drive • Mainboard |
| Hard disk drive cannot format completely. | <ul style="list-style-type: none"> • Enter CMOS Setup and load the default settings. • Hard disk drive cable • Hard disk drive • Mainboard |
| Hard disk drive has write error. | <ul style="list-style-type: none"> • Enter CMOS Setup and load the default settings. • Hard disk drive |
| Hard disk drive LED fails to light, but system operates normally. | <ul style="list-style-type: none"> • With the system power on, measure the voltage of the HDD LED connector. • HDD LED cable |

NOTE Make sure the hard disk drive is configured correctly in CMOS Setup and that cable/jumper are set correctly before diagnosing any hard disk drive problems. (If only one drive is installed, please make sure the drive is connected to master connector or the drive is set to master.)

Optical Disc Drive-related Symptoms

| Symptom/Error | Action/FRU |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CD/DVD-ROM drive LED doesn't come on but works normally. | <ul style="list-style-type: none"> • Enter CMOS Setup and load the default settings. • DIMM • Mainboard |
| CD/DVD-ROM drive LED flashes for more than 30 seconds before LED shutting off. Software asks to reinstall disc. Software displays a reading CD/DVD error. | <ul style="list-style-type: none"> • CD/DVD-ROM may have dirt or foreign material on it. Check with a known good disc. • CD/DVD-ROM is not inserted properly. • CD/DVD-ROM is damaged. |
| CD/DVD-ROM drive cannot load or eject when the system is turned on and its eject button is pressed and held. | <ul style="list-style-type: none"> • Disconnect all cables from CD/DVD-ROM drive except power cable, then press the eject button to try to unload the disc. • CD/DVD-ROM drive power cable • CD/DVD-ROM drive |
| CD/DVD-ROM drive does not read and there are no messages are displayed. | <ul style="list-style-type: none"> • CD may have dirt or foreign material on it. Check with a known good disc. • Ensure the CD/DVD-ROM driver is installed properly. • CD/DVD-ROM drive. |
| CD/DVD-ROM drive can play audio CD but no sound output. | <ul style="list-style-type: none"> • Ensure the headphone jack of the CD/DVD-ROM has an output. • Turn up the sound volume. • Speaker power/connection/cable. • CD/DVD-ROM drive. |

NOTE Make sure the optical disc drive is configured correctly in CMOS Setup, the cable/jumper are set correctly and the drive's optical lens is clean before diagnosing any optical drive problems.

Real-Time Clock-related Symptoms

| Symptom/Error | Action/FRU |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Real-time clock is inaccurate. | <ul style="list-style-type: none"> • Ensure the information in the Standard CMOS Feature of BIOS Setup is set correctly. • RTC battery • Mainboard |

Audio-related Symptoms

| Symptom/Error | Action/FRU |
|------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Audio software program invoked but no sound comes from speakers. | <ul style="list-style-type: none"> • Speaker power/connection/cable |

Modem-related Symptoms

| Symptom/Error | Action/FRU |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Modem ring cannot wake up system from suspend mode. | <ul style="list-style-type: none"> • For an external modem, make sure Power on By Ring in BIOS Setup or Power Management is set to Enabled. For the PCI modem, make sure Wake up by PCI card is set to Enabled. • If a PCI modem card is used, reinsert the modem card to the PCI slot firmly or replace the modem card. • In Win 98, ensure the telephone application is configured correctly for your modem and set to receive messages and/or fax. |
| Data/fax modem software program invoked but cannot receive/send data/fax | <ul style="list-style-type: none"> • Ensure the modem card is installed properly. |
| Fax/voice modem software program invoked but has no sound output. (Data files are received normally; voice from modem cannot be produced, but system sound feature works normally.) | <ul style="list-style-type: none"> • Ensure the modem voice-in cable from modem adapter card is connected to the mainboard |

Video and Monitor-related Symptoms

| Symptom/Error | Action/FRU |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video memory test failed.Video adapter failed. | <ul style="list-style-type: none"> • Remove all non-factory-installed cards. • Load default settings (if screen is readable). • Mainboard |
| Display problem <ul style="list-style-type: none"> • Incorrect colors • No high intensity • Missing, broken, or incorrect characters • Blank monitor (dark) • Blank monitor (bright) • Distorted image • Unreadable monitor | <ul style="list-style-type: none"> • Monitor signal connection/cable • Monitor • Video adapter card • Mainboard |
| Display changing colors. | <ul style="list-style-type: none"> • Monitor signal connection/cable • Video adapter card • Mainboard |

Printer-related Symptoms

| Symptom/Error | Action/FRU |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Printing failed. | <ul style="list-style-type: none">• Ensure the printer driver is properly installed. Refer to the printer service manual.• Printer• Printer cable• Mainboard. |
| Printer problems. | <ul style="list-style-type: none">• Refer to the service manual for the printer. |

Keyboard-related Symptoms

| Symptom/Error | Action/FRU |
|-------------------------------------------|------------------------------------------------------------|
| Some or all keys on keyboard do not work. | <ul style="list-style-type: none">• Keyboard |

Power Supply-related Symptoms

| Symptom/Error | Action/FRU |
|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pressing the power button does not turn off the system. (Only unplugging the power cord from electrical outlet can turn off the system.) | <ul style="list-style-type: none">• Ensure the Soft-off by PWR-BTTN in CMOS Setup (under Power Management) is not set to Instant-off.• Power switch cable assembly |
| Pressing the power button does not turn on the system | <ul style="list-style-type: none">• Ensure the power override switch (located at the back of the computer, just above the connector for the power cable) is not set to OFF.• Power switch cable assembly. |
| Executing software shutdown from Windows98 Start menu does not turn off the system. (Only pressing power button can turn off the system). | <ul style="list-style-type: none">• Enter CMOS Setup and load the default settings.• Reload software from Recovery CD. |
| No system power, or power supply fan is not running. | <ul style="list-style-type: none">• Power supply• Mainboard |

Beep Codes

When no error message is displayed but the computer stops during POST, listen for beep codes.

| Beep | Status | Possible Causes |
|------------------------------------------------|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| One short beep. | System ready | System is OK. |
| Continuous one long beep | Memory not installed or memory error | <ul style="list-style-type: none">• Something is wrong with the memory installed• There is problem accessing the memory (i.e., mainboard problem) |
| One long beep, then two short beeps and repeat | VGA not installed or VGA error | <ul style="list-style-type: none">• The mainboard can not access the video card for some reasons. Either the video card is not working, its memory is not accessible, or its BIOS may be corrupt.• Something is wrong with the mainboard. |
| One long beep, then one short beep | BIOS failure | BIOS damaged. Processor jump to boot block to execute the default procedure. |
| Two short beeps. | CMOS failure | CMOS checksum error |

Undetermined Problems

- NOTE**
- Verify that all attached devices are supported by the computer.
 - Verify that the power supply being used at the time of the failure is operating correctly. (See “Power System Check” on page 45)

Follow the procedures below to isolate the failing FRU. Do not isolate non-defective FRU.

1. Power off the computer.
2. Visually check them for damage. If any problems are found, replace the FRU.
3. Remove or disconnect all of the following devices:
 - Non-Acer devices
 - Printer, mouse, and other external devices
 - Hard disk drive
 - DIMM
 - CD/DVD-ROM drive
 - Expansion boards
4. Power on the computer.
5. Determine if the problem has been resolved.
6. If the problem does not recur, reconnect the removed devices one at a time until you find the failed FRU. If the problem persists, replace the mainboard, and then LCD assembly (one at a time). Do not replace a non-defective FRU.

BIOS Recovery

When you boot up the computer and you hear one long beep, followed by a shorter one, the system BIOS is damaged. This may be caused by an interruption during a BIOS flash procedure (e.g. a power outage) or a corrupted BIOS code, which will cause the system to go into an unbootable state. You need to access and execute the boot block program to reboot the computer and recover the regular BIOS code.

Note the following when restoring the BIOS settings:

- Make sure the computer is connected to a UPS unit during the BIOS recovery process.
- The BIOS crisis recovery disk should be prepared in a computer running the Windows XP or Windows Vista OS.

Creating the BIOS Crisis Recovery Disk

1. Prepare a removable USB storage device with a capacity size greater than 10 MB.
Note that all data on the USB storage device will be cleared during the creation of the crisis disk.
2. Set up a computer running the Windows XP or Windows Vista operating system and plug in the USB storage device into an available USB port.
3. Copy the target BIOS ROM file to the USB storage device and rename it as "amiboot.rom".
4. Unplug the USB storage device.
5. Eject the removable USB storage device from the computer.

Performing a BIOS Recovery

1. Shut down the BIOS failed-computer.
2. Connect the USB storage device containing the "amiboot.rom" file to the failed computer.
3. Press the power button to turn on the computer.
The system will now execute the BIOS recovery process. When the process is complete, four short beeps will be emitted and the computer will automatically reboot.
4. Disconnect the USB storage device from the computer.
5. Press **Delete** to run the CMOS Setup Utility.
6. Press **F9** to load the system default settings.
7. Select **Ok**, then press **Enter**.
8. Press **F9** to save the default settings and close the Setup utility.
9. Select **Ok**, then press **Enter**.

BIOS Update

Updating the BIOS in DOS Mode

1. Press the power button to turn on the computer and boot to DOS mode.
2. Key in 'cd dostool'. (Go to BIOS path like "A:\DOSTOOL")
3. Key in 'flash1M.bat' or 'flash1M'.

```
A:\>cd dostool

A:\DOSTOOL>flash1M
```

4. Press **Enter** to flash the system BIOS.

```
A:\>cd dostool

A:\DOSTOOL>flash1M

A:\DOSTOOL>afudos ..\ROM\PO1-A1.ROM /p /b /c
+-----+
|                               |
|             AMI Firmware Update Utility v4.32             |
|             Copyright (C)2009 American Megatrends Inc. All Rights Reserved.             |
|                               |
+-----+
- Bootblock checksum .... ok
- Module checksums ..... ok
- NVIDIA HDCP : Rom Hole 2 Protected!
- NVIDIA NUMM : Rom Hole 1 Programed!
- Erasing flash ..... done
- Writing flash ..... done
- Verifying flash ..... done
- Erasing Bootblock .... done
- Writing Bootblock .... done
- Verifying Bootblock ... done
- CMOS checksum destroyed
- Program ended normally.

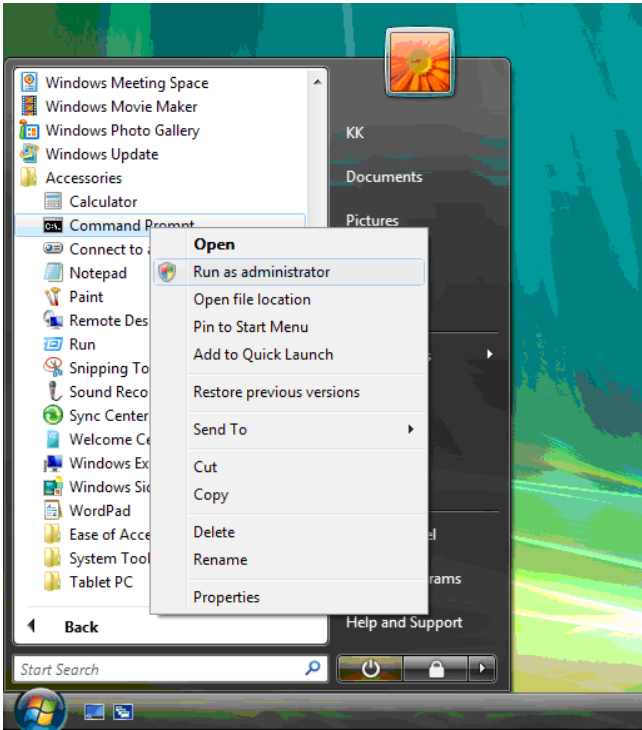
A:\DOSTOOL>_
```

5. Reboot the computer.
6. Press **Delete** to run the CMOS Setup Utility.
7. Press **F9** to load the system default settings.
8. Select **Ok**, then press **Enter**.
9. Press **F9** to save the default settings and close the Setup utility.
10. Select **Ok**, then press **Enter**.

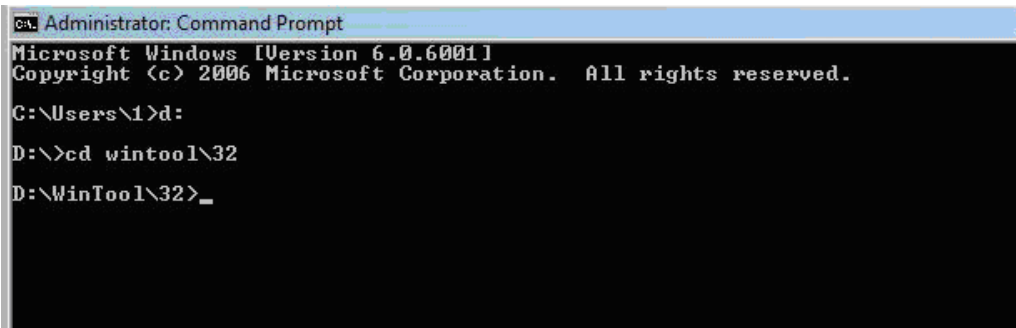
Updating the BIOS in Windows Mode

This BIOS updating procedure is for a computer running a 32- or 64-bit Windows OS.

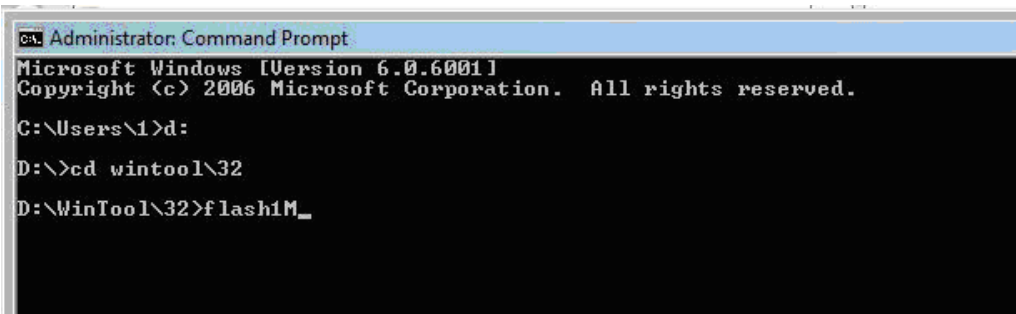
1. Press the power button to turn on the computer.
2. Click **Start | Command Prompt | Run as administrator**.



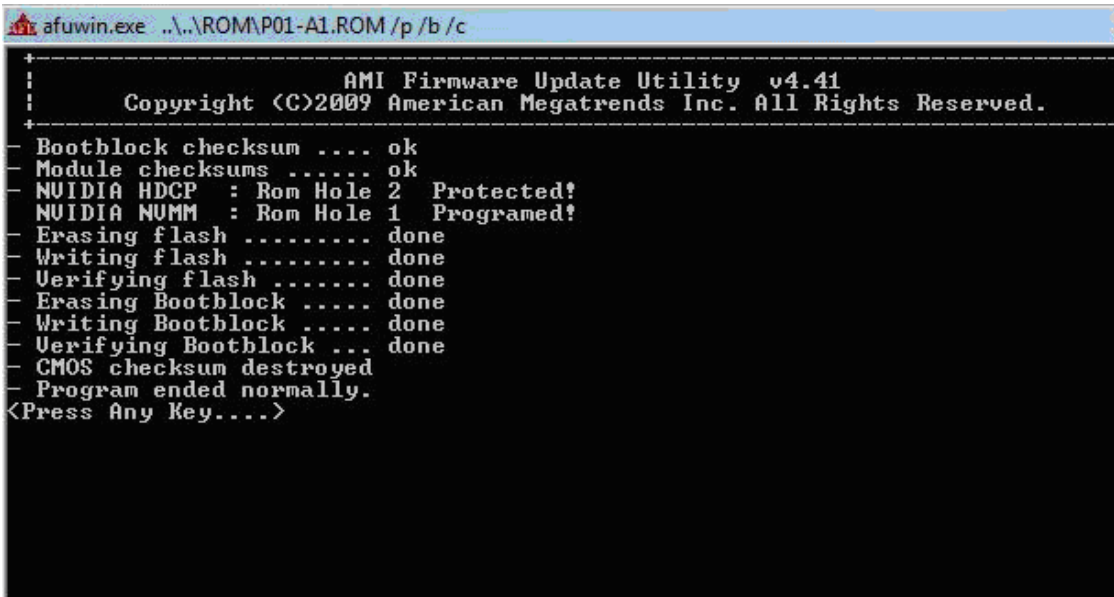
3. Perform the steps below if your computer is running 32-bit Windows.
 - a. Key in 'cd wintool\32'. (Go to BIOS path like "D:\WinTool\32")



- b. Key in 'flash1M.bat' or 'flash1M'.

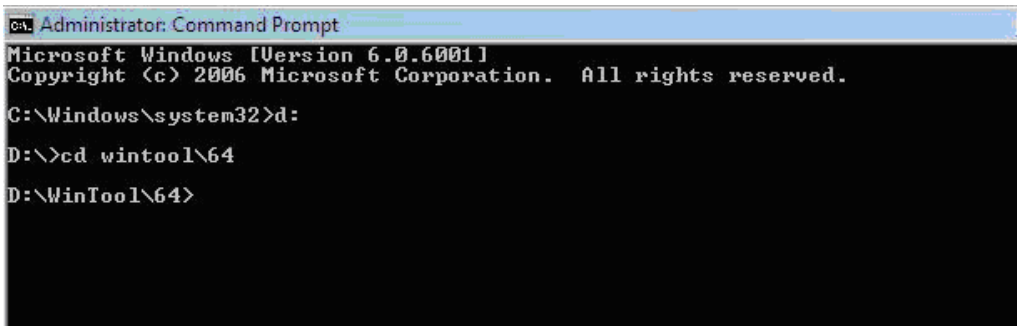


- c. Press **Enter** to flash the system BIOS.



```
afuwin.exe ..\..\ROM\P01-A1.ROM /p /b /c
+-----+
|                                     AMI Firmware Update Utility v4.41
|                                     Copyright (C)2009 American Megatrends Inc. All Rights Reserved.
+-----+
- Bootblock checksum .... ok
- Module checksums ..... ok
- NVIDIA HDCP : Rom Hole 2 Protected!
- NVIDIA NUMM : Rom Hole 1 Programed!
- Erasing flash ..... done
- Writing flash ..... done
- Verifying flash ..... done
- Erasing Bootblock .... done
- Writing Bootblock .... done
- Verifying Bootblock ... done
- CMOS checksum destroyed
- Program ended normally.
<Press Any Key....>
```

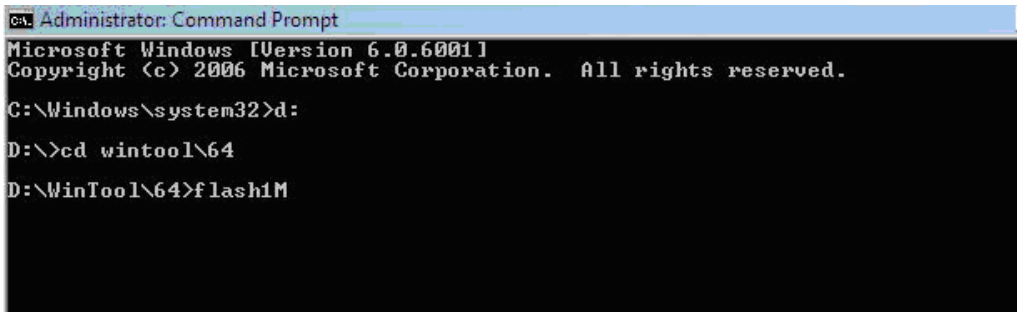
4. Perform the steps below if your computer is running 64-bit Windows.
 - a. Key in 'cd wintool\64'. (Go to BIOS path like "D:\WinTool\64")



```
Administrator: Command Prompt
Microsoft Windows [Version 6.0.6001]
Copyright (c) 2006 Microsoft Corporation. All rights reserved.

C:\Windows\system32>d:
D:\>cd wintool\64
D:\WinTool\64>
```

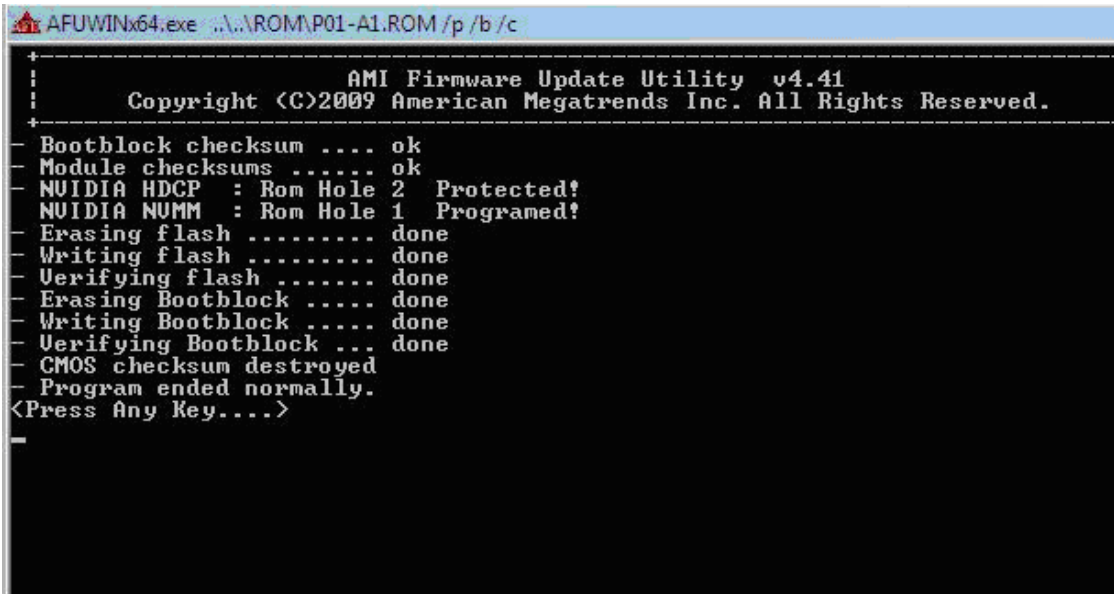
- b. Key in 'flash1M.bat' or 'flash1M'.



```
Administrator: Command Prompt
Microsoft Windows [Version 6.0.6001]
Copyright (c) 2006 Microsoft Corporation. All rights reserved.

C:\Windows\system32>d:
D:\>cd wintool\64
D:\WinTool\64>flash1M
```


- c. Press **Enter** to flash the system BIOS.



```
AFUWINx64.exe ...\ROM\P01-A1.ROM /p /b /c
+-----+
|                                     AMI Firmware Update Utility v4.41                                     |
|                                     Copyright (C)2009 American Megatrends Inc. All Rights Reserved.                                     |
+-----+
- Bootblock checksum .... ok
- Module checksums ..... ok
- NVIDIA HDCP   : Rom Hole 2 Protected!
- NVIDIA NUMM   : Rom Hole 1 Programed!
- Erasing flash ..... done
- Writing flash ..... done
- Verifying flash ..... done
- Erasing Bootblock ..... done
- Writing Bootblock ..... done
- Verifying Bootblock ... done
- CMOS checksum destroyed
- Program ended normally.
<Press Any Key....>
```

5. Reboot the computer.
6. Press **Delete** to run the CMOS Setup Utility.
7. Press **F9** to load the system default settings.
8. Select **Ok**, then press **Enter**.
9. Press **F9** to save the default settings and close the Setup utility.
10. Select **Ok**, then press **Enter**.


Clearing CMOS

You may need to clear the Setup configuration values (CMOS) if the configuration has been corrupted, or if incorrect settings made in the Setup Utility caused error messages to be unreadable. This procedure will clear the BIOS supervisor password as well.

Use the JBIOS1 jumper to clear the CMOS data.

- 1-2 position: Normal operation (default)
- 2-3 position: Clear CMOS data

To clear the CMOS data:

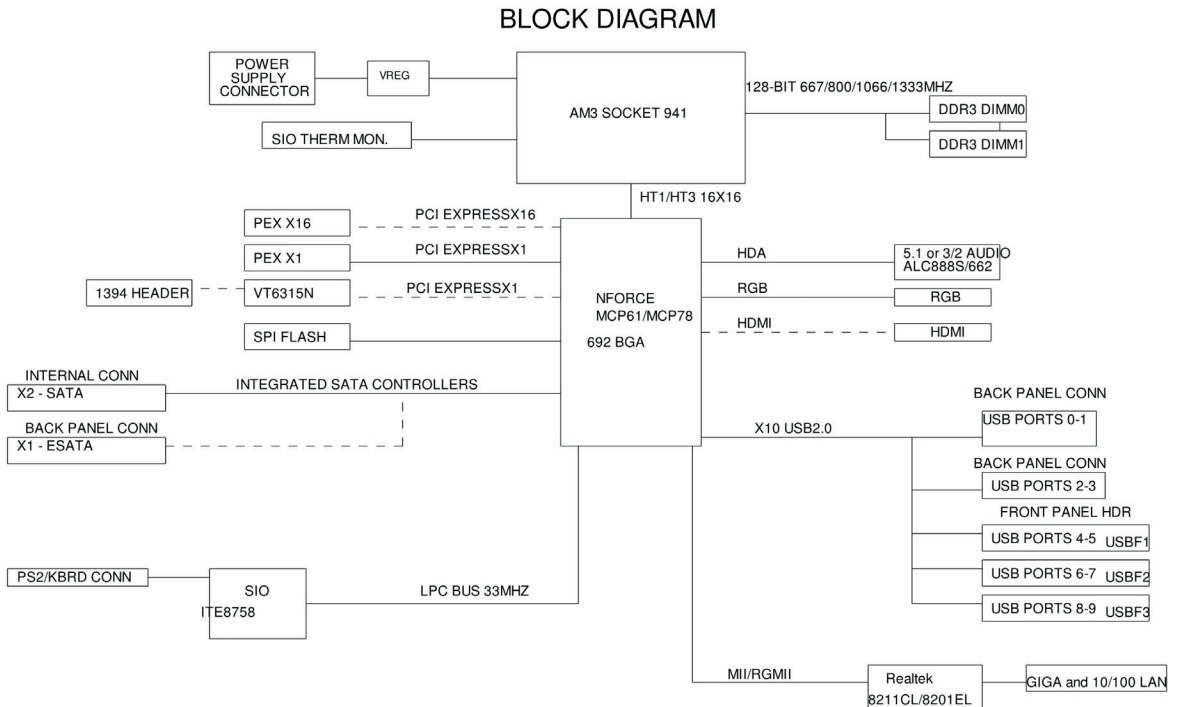
1. Turn off the power to the computer and all peripherals.
2. Unplug the power cord from the computer.
3. Unplug the network cable and all connected peripheral devices from the computer.
4. Place the computer on a flat, steady surface.
5. Remove the side panel.
6. If necessary, remove any expansion cards, assemblies or cables that prevent access to the CMOS clear jumper.
7. Locate the JBIOS1 jumper on the mainboard.
8. Remove the jumper block and set it over the 2-3 pins for 20 to 30 seconds.
9. Return the jumper block to its default 1-2 position.
10. Reinstall any expansion card, peripheral, and system cables that have previously been removed.
11. Reinstall the side panel.
12. Connect the AC power cord to the system.
13. Press the power button  to turn on the computer.
14. During POST, press **Delete** to access the Setup Utility.
15. Press **F9** to load the system default values.
16. Press **F10** to save the changes you made and close the Setup Utility.

System Architecture

This chapter shows the block diagram and board layout of the Aspire AX1400 computer.

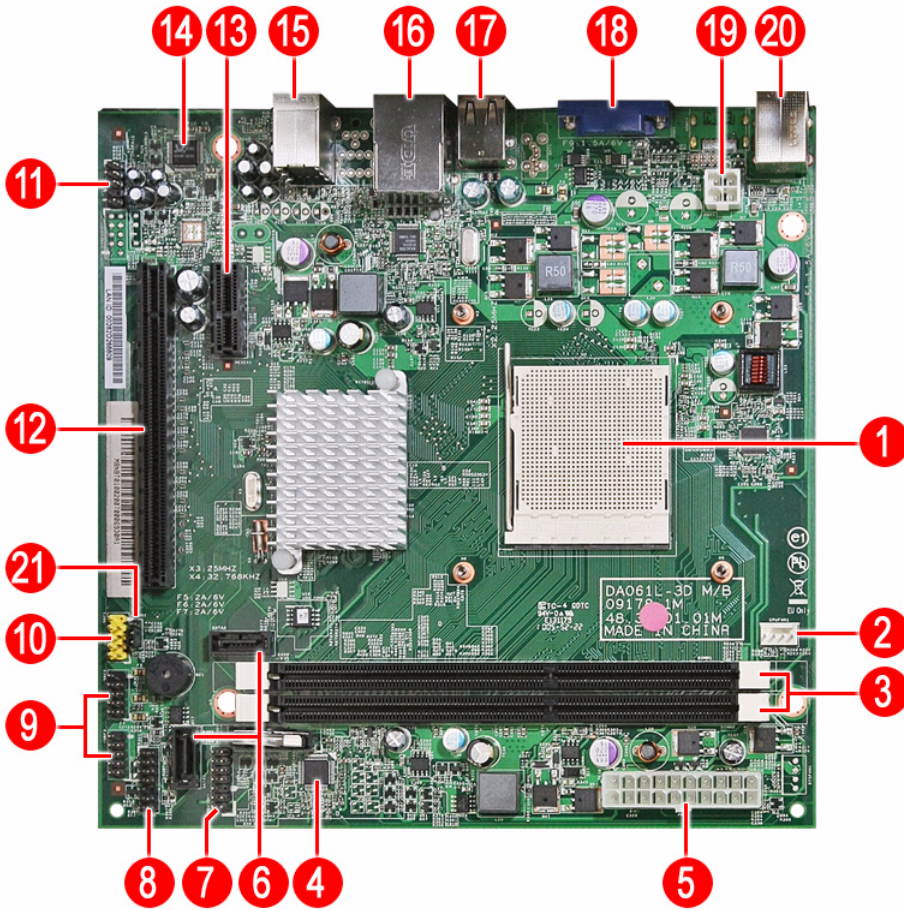
Block Diagram

The core subsystems of the Aspire AX1400 computer are depicted in the following block diagram.



Mainboard Layout

This section shows the major mainboard components.



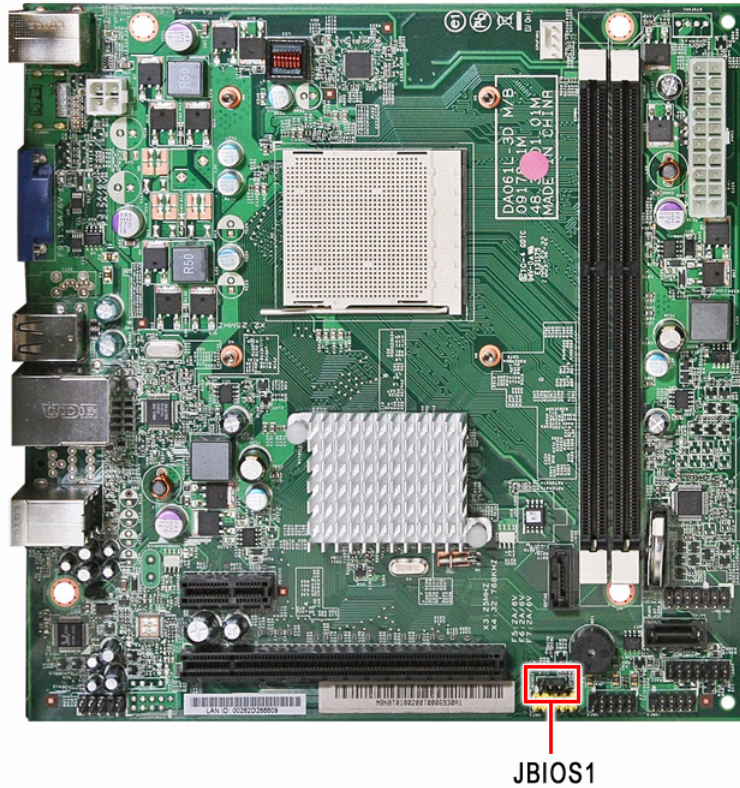
| No. | Label | Description | No. | Label | Description |
|-----|----------|---------------------------------|-----|-----------|-------------------------------|
| 1 | U1 | CPU socket | 12 | PCIEX16 | PCIEX16 Slot |
| 2 | CPUFAN1 | CPU cooling fan connector | 13 | PCIEX1 | PCIEX1 36-pin slot |
| 3 | DIMM1-2 | DDR3 240-pin slots | 14 | U2 | ALC662 |
| 4 | U23 | ITE 8758 | 15 | AUDJACK2 | Line in/Line Out/MIC |
| 5 | PWR2 | Standard 24-pin power connector | 16 | USBLAN1 | RJ45+USB connector |
| 6 | SATA1-2 | Serial ATA connectors | 17 | USBR1 | USB-A 8P connector |
| 7 | DEBUGH1 | 12-pin DEBUG port | 18 | VGA1 | VGA connector |
| 8 | LEDH1 | 12-pin power cable header | 19 | PWR1 | ATX 4-pin connector |
| 9 | USBF 2-3 | Front panel USB header | 20 | KBMSCONN1 | Keyboard and mouse connectors |
| 10 | USBF 1 | Front panel card reader header | 21 | JBIOS1 | Clear CMOS jumper |
| 11 | AUDIOF1 | Front panel audio jack header | | | |

Jumper Setting

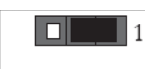
This section explains how to set the jumper for correct configuration of the main board.

Jumpers with more than one pin are numbered. When setting a jumper, ensure that the jumper caps are placed on the correct pins.

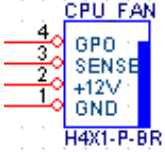
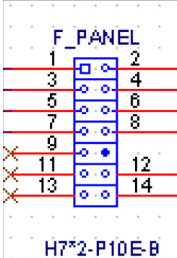

The following illustration shows the location of JBIOS1.



The following table shows the settings of the 3-pin Clear CMOS (JBIOS1) jumper. Place the jumper cap on pins 1 and 2 to close or short the jumper. Place the jumper cap on pins 2 and 3 to open or clear the jumper.

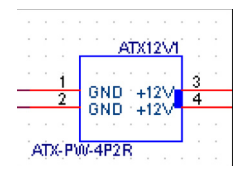
| Jumper | Type | Description | Setting (default) | |
|--------|-------|-------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| JBIOS1 | 3-pin | Clear CMOS | 1-2: Close (default) 2-3: Open Before clearing the CMOS, make sure to turn off the system. |  |

Internal header pin definition

| Header Name | Function | Definition |
|--------------------------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>CPU FAN H4X1-P-BR</p> | CPU FAN HEADER | 1: GND 2: +12V 3: SENSE 4: PWM CONTROL |
|  <p>F_PANEL H7*2-P10E-B</p> | FRONT PANEL HEADER | 1: SATALED+ 2: ACPI_LED 3: SATALED- 4: PWR_LED 5: GND 6: PWR_SW 7: RESET 8: GND 9: NC 10: Key 11: NC 12: VCC 13: NC 14: -ACTIVE_C |
| | FRONT USB HEADER | 1: USBVCC_1 2: USBVCC_1 3: USB0_XN 4: USB1_XN 5: USB0_XP 6: USB1_XP 7: GND 8: GND 9: KEY 10: GND |
| | FRONT USB HEADER | 1: USBVCC_2 2: USBVCC_2 3: USB2_XN 4: USB4_XN 5: USB2_XP 6: USB4_XP 7: GND 8: GND 9: KEY 10: GND |
|  <p>F_AUDIO H5X2-P8E-PU</p> | FRONT AUDIO HEADER | 1: PORT-F_L 2: AUGND 3: PORT-F_R 4: FRONT_AUD_DET 5: PORT-E_R 6: MIC2_JD 7: AUGND 8: KEY 9: PORT-E_L 10: LINE2_JD |

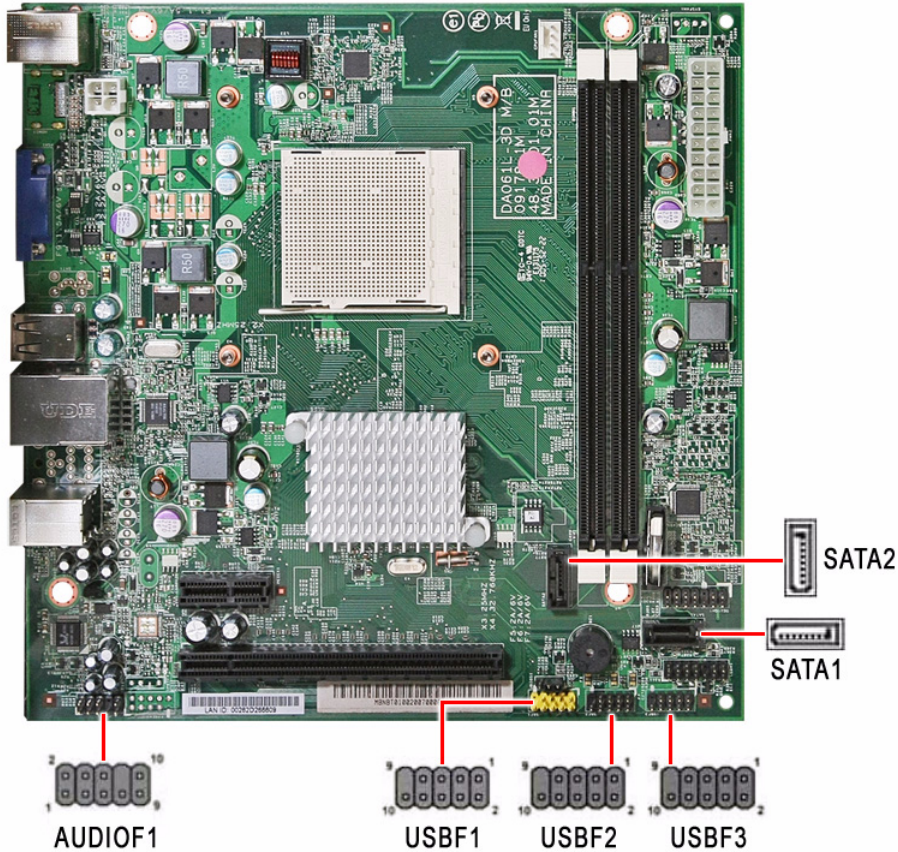
Connector pin definition

| Header Name | Function | Definition |
|-------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | PSKBMS CONN | 1: KBDATA 2: NC 3: GND 4: KBVCCSB 5: KBCLK 6: NC 7: MSDATA 8: NC 9: GND 10: KBVCCSB 11: MSCLK 12: NC 13: GND 14: GND 15: GND 16: GND 17: GND |
| | VGA CONN | 1: RED 2: GREEN 3: BLUE 4,11: NC 9: HDMIVCC 12: VDAC_SDAT 13: HSYNC 14: VSYNC 15: VDAC_SCLK 5,6,7,8,10,16,17: GND |
| | SATA CONN | 1: GND 2: SATA0_TX_P 3: SATA0_TX_N 4: GND 5: SATA0_RX_N 6: SATA0_RX_P 7: GND |
| | SATA CONN | 1: GND 2: SATA1_TX_P 3: SATA1_TX_N 4: GND 5: SATA1_RX_N 6: SATA1_RX_P 7: GND |
| | ATX_POWER CONN | 1:VCC3 13:VCC3 2:VCC3 14:-12V 3: GND 15:GND 4:VCC 16:ATX_PSON_L 5:GND 17:GND 6:VCC 18:GND 7:GND 19:GND 8:GND 20:GND 8:ATX_PWRGD 20:NC 9:5VSB 21VCC 10:+12V 22:VCC 11:+12V 23:VCC 12:VCC3 24:GND |

| Header Name | Function | Definition |
|-----------------------------------------------------------------------------------|-------------|----------------------------------------------|
|  | ATX12V CONN | 1: GND 2: GND 3: +12V_4P 4: +12V_4P |

Connecting Optional Devices

Refer to the following for information on connecting the main board's optional devices:



SATA1~2: Serial ATA connectors

These connectors are used to support the new Serial ATA devices for the highest datatransfer rates (3.0 Gb/s), simpler disk drive cabling and easier PC assembly. It eliminates limitations of the current Parallel ATA interface. But maintains register compatibility and software compatibility with Parallel ATA.

| Pin | Signal Name | Pin | Signal Name |
|-----|-------------|-----|-------------|
| 1 | Ground | 2 | TX+ |
| 3 | TX- | 4 | Ground |
| 5 | RX- | 6 | RX+ |
| 7 | Ground | | |

AUDIOF1: Front Panel Audio header

This header allows the user to install auxiliary front-oriented microphone and line-out ports for easier access.

| Pin | Signal Name | Pin | Signal Name |
|-----|-------------|-----|---------------|
| 1 | PORT 1L | 2 | AUD_GND |
| 3 | PORT 1R | 4 | PRESENCE# |
| 5 | PORT 2R | 6 | SENSE1_RETURN |
| 7 | SENSE_SEND | 8 | KEY |
| 9 | PORT 2L | 10 | SENSE2_RETURN |

USBF1~3: Front Panel USB headers

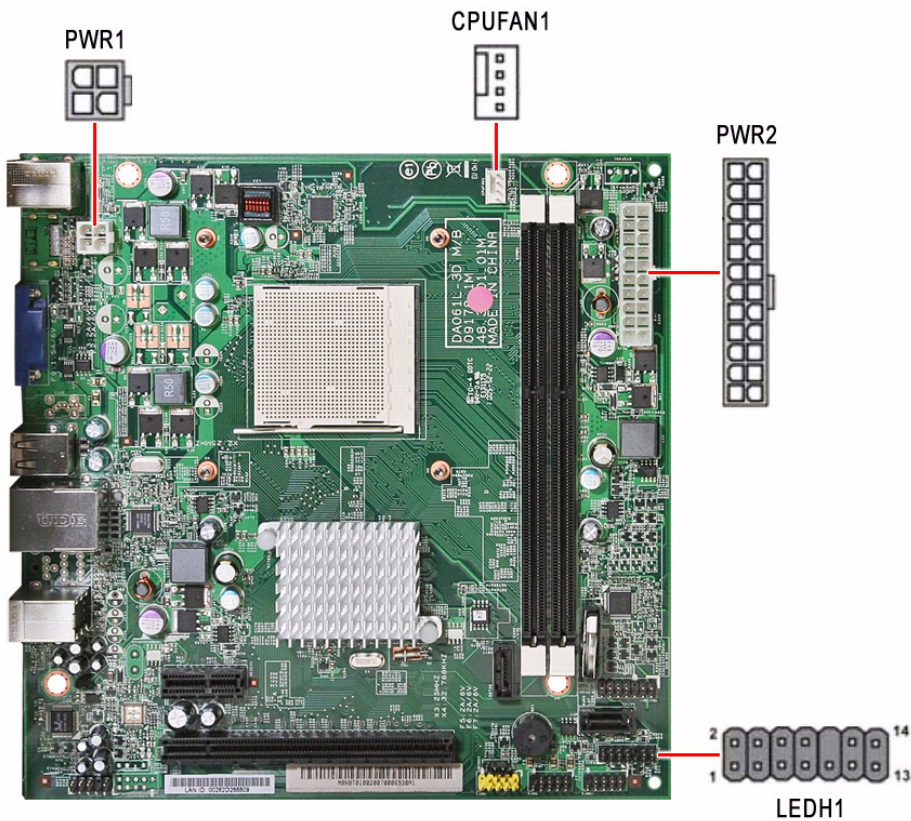
The motherboard has two USB ports installed on the rear edge I/O port array. Additionally, some computer cases have USB ports at the front of the case. If you have this kind of case, use auxiliary USB connector to connect the front-mounted ports to the motherboard.

| Pin | Signal Name | Function |
|-----|-------------|----------------------------|
| 1 | USBPWR | Front Panel USB Power |
| 2 | USBPWR | Front Panel USB Power |
| 3 | USB_FP_P0- | USB Port 0 Negative Signal |
| 4 | USB_FP_P1- | USB Port 1 Negative Signal |
| 5 | USB_FP_P0+ | USB Port 0 Positive Signal |
| 6 | USB_FP_P1+ | USB Port 1 Positive Signal |
| 7 | GND | Ground |
| 8 | GND | Ground |
| 9 | Key | No pin |
| 10 | USB_FP_OC0 | Overcurrent signal |

Connecting Case Components

After you have installed the motherboard into a case, you can begin connecting the motherboard components. Refer to the following:

1. Connect the CPU cooling fan cable to CPUFAN1.
2. Connect the standard power supply connector to PWR2.
3. Connect the case switches and indicator LEDs to the LEDH1.
4. Connect the auxiliary case power supply connector to PWR1.



CPUFAN1: CPU Cooling Fan Power Connector

| Pin | Signal Name | Function |
|-----|-------------|---------------|
| 1 | GND | System ground |
| 2 | +12V | Power +12V |
| 3 | Sense | Sensor |
| 4 | PWM | PWM |

PWR2: ATX 24-pin Power Connector

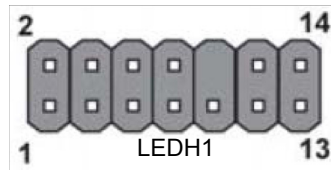
| Pin | Signal Name | Pin | Signal Name |
|-----|-------------|-----|-------------|
| 1 | +3.3V | 13 | +3.3V |
| 2 | +3.3V | 14 | -12V |
| 3 | Ground | 15 | Ground |
| 4 | +5V | 16 | PS_ON |
| 5 | Ground | 17 | Ground |
| 6 | +5V | 18 | Ground |
| 7 | Ground | 19 | Ground |
| 8 | PWRGD | 20 | -5V |
| 9 | +5VSB | 21 | +5V |
| 10 | +12V | 22 | +5V |
| 11 | +12V | 23 | +5V |
| 12 | +3.3V | 24 | Ground |

PWR1: ATX 12V Power Connector

| Pin | Signal Name |
|-----|-------------|
| 1 | Ground |
| 2 | Ground |
| 3 | +12V |
| 4 | +12V |

Front Panel Header

The front panel header (LEDH1) provides a standard set of switch and LED headers commonly found on ATX or micro-ATX cases. Refer to the table below for information:



| Pin | Signal Name | Function | Pin | Signal Name | Function |
|-----|-------------|-------------------|-----|-------------|------------------|
| 1 | VCC | Reset Switch (+) | 2 | GLED0 | *MSG LED (+) |
| 3 | HDD_LEDN | Hard disk LED (-) | 4 | GLED1 | *MSG LED (-) |
| 5 | GND | Reset Switch (-) | 6 | PWRSW | Power Switch (+) |
| 7 | HWRST_L | Reset Switch (+) | 8 | GND | Power Switch (-) |
| 9 | F_PANEL_DET | Reserved | 10 | KEY | No pin |
| 11 | NC | Reserved | 12 | VCC | Reset Switch (+) |
| 13 | NC | Reserved | 14 | F_LAN_LED | Reset Switch (+) |

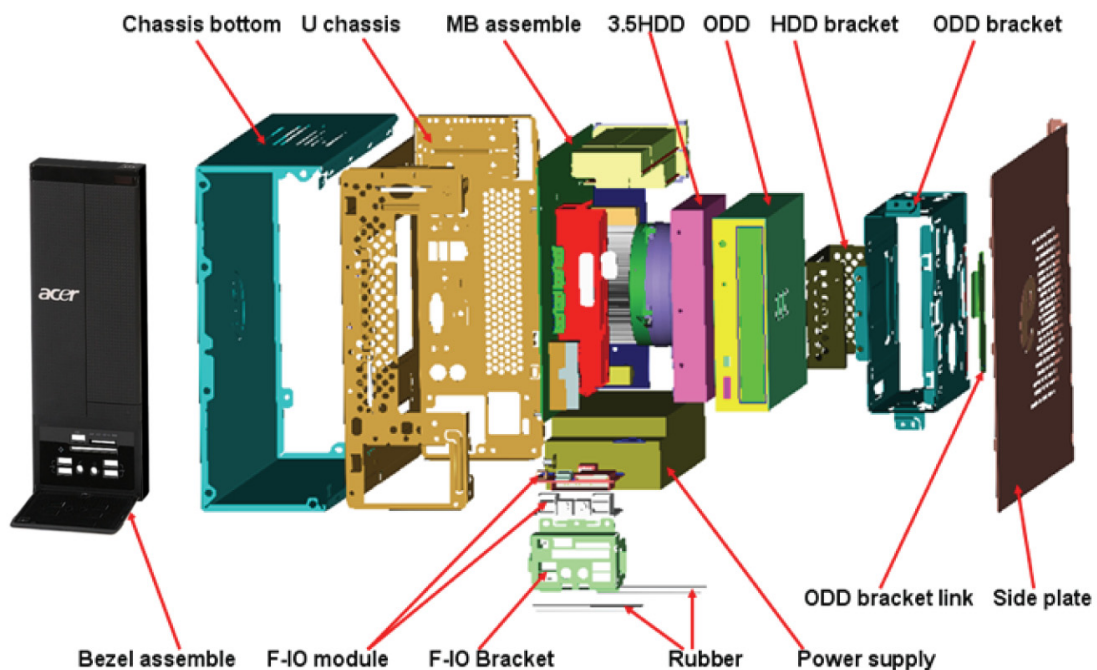
Field Replaceable Unit (FRU) List

This chapter gives you the FRU (Field Replaceable Unit) listing of the Aspire AX1400 computer global configurations. Refer to this list when ordering for repair parts or for RMA (Return Merchandise Authorization).

IMPORTANT When ordering FRU parts, check the most up-to-date information available on your regional web or channel. For whatever reasons a part number is changed, it will NOT be noted on the printed Service Guide. For Acer authorized service providers, your Acer office may have a different part number code from those given in the FRU list of this printed Service Guide. You MUST use the local FRU list provided by your regional Acer office to order FRU parts for service.

NOTE Follow the local government regulations, or the rules set by your regional office on how to return or dispose of defective parts.

Exploded Diagram



Aspire AX1400 FRU List

ACER_AX1400_AMANALO(NO: 91.3BU01.A01G)

| Category | Part Name | Description | Acer Part No. |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------|
| BOARDS  | CARD READER 9 IN 1 8.5L AU6476 W/USB2.0 & USB CABLE W/O 1394 | CR 9-IN-1 ALCOR AU6476, 420MM USB CABLE | CR.10400.102 |
| | CARD READER 9 IN 1 8.5L AU6475 W/USB2.0 & USB CABLE W/O 1394 | CR 9-IN-1 RI727 ALCOR AU6475, 420MM USB CABLE | CR.10400.107 |
| | FRONT IO BOARD CENTURY W/AUDIO CABLE*1&USB CABLE*2 | F-IO BOARD/2AUDIO JACK+2USB CO | 55.SC101.001 |
|  | MODEM CARD LITE-ON D-1156E#A10A LOW-PROFILE PCI-E 56K V.92 | MODEM 56K ATX LSI UNIVERSAL (P | FX.10100.003 |
| | MODEM CARD 56K PRO-NETS PRONETS VD56UL EXTERNAL USB REV 1.0 | MODEM PRO-NETS VD56UL EXTERNAL | FX.10100.023 |
| | WIRELESS LAN BOARD 802.11BGN LITEON WN7600R | WLAN 802.11BGN RALINK MC 1*2 | NI.10200.009 |
| | WIRELESS LAN BOARD 802.11BGN PRONETS WU71RL USB | WLAN 802.11 BGN WU71RL USB | NI.10200.023 |
| | WIRELESS LAN BOARD 802.11BGN 1X1 RALINK RT3090 LOW-PROFILE | WLAN 802.11BGN 1X1 RALINK RT3090 (LOW-PR | NI.10200.038 |
|  | VGA CARD PCPARTNER 288-1N141-A00AC NVIDIA GT315 512MB SDDR3 DVI+HDMI ATX (SAMSUNG) | PCP NV GT315 512MB SDDR3 SDI | VG.PCPT3.153 |
| | VGA CARD PCPARTNER 288-1E145-A01AC HD5450 512MB SDDR3 64BITS SAMSUNG DVI HDMI W/LP BRACKET ROHS | VGA CARD 5450 512MB SDDR3 SDI | VG.APC54.511 |
| CABLES | DVI TO VGA DONGLE CONNECTOR | DVI TO VGA DONGLE | D0.VGA26.P01 |
| | HDD SATA CABLE | C.A. SATA HDD BOXERII | 50.SC101.003 |
| | LED SWITCH CABLE | C.A. LED SWITCH BOXER X350 | 50.SE301.002 |
| | ODD SATA CABLE | C.A. SATA ODD BOXERII | 50.SC101.002 |
| | POWER CORD 250V 3PIN 1800MM UK | POWER CORD 1800MM 250V UK | 27.03118.031 |

| Category | Part Name | Description | Acer Part No. | |
|-----------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------|--------------|
| CASE/COVER/BRACKET ASSEMBLY | FRONT IO BRACKET | BRKT F-IO BOXER X350 | 33.SE301.001 | |
| | ASSY MAIN-CHASSIS MCP61 BOXER X350 | ASSY MAIN-CHASSIS MCP61 BOXER X350 | 60.SE901.001 | |
| | UPPER CASE | CAS UP BOXER X350 | 60.SE201.002 | |
| | LOWER CASE | ASSY LCASE-ASM MCP61 BOXER X350 | 60.SE901.002 | |
| | HDD&ODD COVER BRACKET | ASSY ODD-HDD-ASM BOXER X3 | 33.SC101.002 | |
| | FRONT BEZEL W/LED SWITCH CABLE | ASSY MAIN-BEZEL BOXER X350 | 60.SE201.004 | |
| CPU/PROCESSOR |  | CPU AMD ATHLON II X2 240 2.8GHZ 2M L2 CACHE 65W REGOR | IC CPU ATHLON II X2 240 2.8GHZ | KC.AT202.240 |
| | | CPU AMD CPU ATHLON II X2 215 65W 2.7G ADX215OCK22GQ | IC CPU ATHLON II X2 215 65W 2. | KC.AT202.215 |
| | | CPU AMD ATHLON II X2 245 2.9GHZ 2M L2 CACHE 65W REGOR | IC CPU ATHLON II X2 245 2.9GHZ | KC.AT202.245 |
| | | CPU AMD ATHLON II X2 250 3.0GHZ 2M L2 CACHE 65W REGOR ATHIIX2250 | IC CPU ATHLON II X2 250 3.0GHZ | KC.AT202.250 |
| | | CPU AMD ATHLONII 255 AM3+ 2X1M 4000 940 65W C-2 3.1G DUAL CORE | IC CPU ATHLONII 255 AM3+ 2X1M | KC.AT202.255 |
| | | CPU AMD ATHLONII B22 AM3+ 2.8G 2X1M 4000 940 65W C-2 DUAL CORE | IC CPU ATHLONII B22 AM3+ 2.8G | KC.AT202.B22 |
| | | CPU AMD ATHLONII B24 AM3+ 3.0G 2X1M 4000 940 65W C-2 DUAL CORE | IC CPU ATHLONII B24 AM3+ 3.0G | KC.AT202.B24 |
| | | CPU AMD ATHLONII 235E AM3+ 2.7G 2X1M 4000 940 45W C-2 DUAL CORE | IC CPU ATHLONII 235E AM3+ 2.7G | KC.AE202.235 |
| | | CPU AMD ATHLONII 240E AM3+ 2.8G 2X1M 4000 940 45W C-2 DUAL CORE | IC CPU ATHLON II X2 240E 2.8G | KC.AE202.240 |
| | | CPU AMD ATHLON II X3 400E 2.2GHZ 1.5M L2 CACHE 45W RANA ATHIIX3400E | IC CPU ATHLON II X3 400E 2.2GH | KC.AE202.400 |
| | | CPU AMD ATHLON II X3 405E 2.3GHZ 1.5M L2 CACHE 45W RANA ATHIIX3405E | IC CPU ATHLON II X3 405E 2.3GH | KC.AE202.405 |
| | | CPU AMD ATHLONII 160U AM3+ 1.8G 1M 3600 940 20W C-2 SINGLE CORE | IC CPU ATHLONII 160U AM3+ 1.8G | KC.AU202.160 |
| | | CPU AMD ATHLONII 250U AM3+ 1.6G 2X1M 3200 940 25W C-2 DUAL CORE | IC CPU ATHLONII 250U AM3+ 1.6G | KC.AU202.250 |
| | | CPU AMD ATHLONII 260U AM3+ 1.8G 2X1M 3600 940 25W C-2 DUAL CORE | IC CPU ATHLONII 260U AM3+ 1.8G | KC.AU202.260 |



| Category | Part Name | Description | Acer Part No. |
|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------|---------------|
| CPU/PROCESSOR | CPU AMD PHENOMII X 3 700E 2.4GHZ 7.5M TOTAL CACHE 65W HEKA PHNMII700E | IC CPU PHENOMII X 3 700E 2.4GH | KC.PE202.700 |
| | CPU AMD PHENOMII X 3 705E 2.5GHZ 7.5M TOTAL CACHE 65W HEKA PHNMII705E | IC CPU PHENOMII X 3 705E 2.5GH | KC.PE202.705 |
| | CPU AMD SEMPRON 140 2.7G 45W PGA | IC CPU SEMPRON 140 2.7G 45W PGA | KC.SMP02.140 |
| DVD-RW DRIVE  | ODD PLDS SUPER-MULTI DRIVE HH 16X DH-16AASH BLACK BEZEL SATA FOR HF+WINDOWS7 | ODD HH SM HF+W7 PLDS DH-16AASH | KU.0160F.009 |
| | ODD HLDS SUPER-MULTI DRIVE HH 16X GH41N BLACK BEZEL SATA HF + WIN 7 | ODD HH SM HF+W7 HLDS GH-41N | KU.0160D.049 |
| | ODD HLDS DVD-ROM HH 16X TRAY DH20N LF BLACK BEZEL SATA HF+WIN 7 | DVD ROM HH HF+W7 HLDS DH20N | KV.0160D.016 |
| | ODD PLDS DVD-ROM HH DL 16X TRAY DH-16D5SH LF BLACK BEZEL SATA HF+WIN 7 | DVD ROM HH HF+W7 DH- 16D5SH | KV.0160F.002 |
| HDD/HARD DISK DRIVE  | HDD 320GB 3.5" 7200RPM SATA II SEAGATE PHARAOH 8MB NCQ | HDD 320G 3.5" SEAGATE PHARAOH | KH.32001.015 |
| | HDD 320GB 3.5" 7200RPM SATA II 8MB HGST HDT721032SLA380 SATURN | HDD 320GB HGST HDT721032SLA380 | KH.32007.006 |
| | HDD 320GB 3.5" 7200RPM SATA II 16MB HGST HDS721032CLA362 JUPITER | HDD 320GB 3.5" HGST HDS721032CLA362 7.2K | KH.32007.011 |
| | HDD 320GB 3.5" 7200RPM SATA II WD WD3200AAJS- 22L7A0 XL320S | HDD 320GB WD WD3200AAJS-22L7A0 | KH.32008.016 |
| | HDD 3.5" 500GB 7200RPM SATA SEAGATE PHARAOH ST3500418AS | HDD 500GB SGT ST3500418AS 7.2K | KH.50001.012 |
| | HDD 500GB 3.5" 7200RPM SATA II 16MB HGST HDS721050CLA362 JUPITER | HDD 500GB HGST HDS721050CLA362 | KH.50007.012 |
| | HDD 3.5" 500GB 7200RPM SATA WD XL320M WD5000AAKS-22M9A0 | HDD 500GB WD5000AAKS-22V1A0 | KH.50008.014 |
| | HDD 640GB 3.5" 7200RPM HGST HDT721064SLA360 SATURN SATA | HDD 640GB HGST HDT721064SLA360 | KH.64007.001 |
| | HDD 640GB 3.5" 7200RPM SATA II 32MB HGST HDS721064CLA332 JUPITER | HDD 640GB HGST HDS721064CLA332 | KH.64007.002 |
| | HDD 640GB 3.5" 7200RPM SATA II WD WD6400AAKS- 22A7B2 XL320-M | HDD 640GB WD WD6400AAKS-22A7B2 | KH.64008.003 |
| HDD 3.5" 1000GB 7200RPM SATA SEAGATE SEAGATE ST31000528AS LF | HDD 1TB SGT ST31000528AS 7.2KR | KH.01K01.007 | |



| Category | Part Name | Description | Acer Part No. |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------|---------------|
| HDD/HARD DISK DRIVE | HDD 1TB 3.5" 5400RPM SATAII WD10EADS-22M4B0 8MB GP | HDD 1TB WD10EADS- 22M2B0 GP | KH.01K08.005 |
| | HDD 1TB 3.5" 7200RPM SATA HGST SATURN HDT721010SLA360 | HDD 1TB HGST HDT721010SLA360 | KH.01K07.002 |
| | HDD 1TB 3.5" 7200RPM SATA II 32MB HGST HDS721010CLA332 JUPITER | HDD 1TB HGST HDS721010CLA332 | KH.01K07.003 |
| | HDD 1.5TB 3.5" 5400RPM SATA WD GP500 WD15EADS- 22P8B0 32MB GP | HDD 1.5TB WD15EADS- 22P8B0 GP | KH.15K08.001 |
| | HDD 1.5TB 3.5" 7200RPM SATA SEAGATE BRINKS ST31500341AS 32MB CC4H 7 | HDD 1.5TB SGT ST31500341AS 7.2 | KH.15K01.002 |
| HEATSINK  | CPU HEATSINK AIR COOLER LGA775 72*72 65W AVC | COOLER LGA775 72*72 65W AVC | HI.10800.035 |
| | CPU COOLER LGA775 45W 72*72 AVC | COOLER LGA775 72*72 45W AVC | HI.10800.024 |
| | KEYBOARD PS/2 104 KEY CHICONY KB-07593US25522V BLACK US W/O EKEY | KB CHICONY KB-0759 PS/2 104K B | KB.PS203.284 |
| KEYBOARD  | KEYBOARD PS/2 104 KEY BLACK TRADITIONAL CHINESE W/O EKEY | KB CHICONY KB-0759 PS/2 104K B | KB.PS203.285 |
| | KEYBOARD PS/2 104 KEY SIMPLIFIED CHINESE W/O EKEY | KB CHICONY KB-0759 PS/2 104K B | KB.PS203.286 |
| | KEYBOARD PS/2 104 KEY CHICONY KB-07593U425522V BLACK US INTERNATIONAL W/O EKEY | KB CHICONY KB-0759 PS/2 104K B | KB.PS203.287 |
| | KEYBOARD PS/2 104 KEY CHICONY KB-07593A025522V BLACK ARABIC ENGLISH W/O EKEY | KB CHICONY KB-0759 PS/2 104K B | KB.PS203.288 |
| | KEYBOARD PS/2 104 KEY CHICONY KB-07593T025522V BLACK THAILAND W/O EKEY | KB CHICONY KB-0759 PS/2 104K B | KB.PS203.289 |
| | KEYBOARD PS/2 105 KEY CHICONY CHICONY BLACK SPANISH W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.290 |
| | KEYBOARD PS/2 105 KEY BLACK PORTUGUESE W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.291 |
| | KEYBOARD PS/2 105 KEY CHICONY KB-07596CA25522V BLACK CANADIAN FRENCH | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.292 |
| | KEYBOARD PS/2 107 KEY BLACK BRAZILIAN PORTUGUESE | KB CHICONY KB-0759 PS/2 107K B | KB.PS203.293 |
| | KEYBOARD PS/2 109 KEY BLACK JAPANESE W/O EKEY | KB CHICONY KB-0759 PS/2 109K B | KB.PS203.294 |
| | KEYBOARD PS/2 105 KEY CHICONY KB-07596D125522V BLACK GERMAN W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.295 |

| Category | Part Name | Description | Acer Part No. |
|----------|----------------------------------------------------------------------------------|-----------------------------------|---------------|
| KEYBOARD | KEYBOARD PS/2 105 KEY CHICONY KB-07596I125522V BLACK ITALIAN W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.296 |
| | KEYBOARD PS/2 105 KEY CHICONY KB-07596F125522V BLACK FRENCH W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.297 |
| | KEYBOARD PS/2 105 KEY CHICONY KB-07596S025522V BLACK SWEDISH W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.298 |
| | KEYBOARD PS/2 105 KEY CHICONY KB-07596GB25522V BLACK UK W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.299 |
| | KEYBOARD PS/2 105 KEY BLACK DUTCH W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.300 |
| | KEYBOARD PS/2 105 KEY CHICONY KB-07596CH25522V BLACK SWISS/G W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.301 |
| | KEYBOARD PS/2 105 KEY BLACK BELGIUM W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.302 |
| | KEYBOARD PS/2 105 KEY BLACK ICELANDIC W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.303 |
| | KEYBOARD PS/2 105 KEY CHICONY KB-07596N025522V BLACK NORWEGIAN W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.304 |
| | KEYBOARD PS/2 104 KEY BLACK US INTERNATIONAL W/ HEBREW W/O EKEY | KB CHICONY KB-0759 PS/2 104K B | KB.PS203.305 |
| | KEYBOARD PS/2 105 KEY BLACK US INTERNATIONAL W/ HEBREW W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.306 |
| | KEYBOARD PS/2 105 KEY BLACK SLOVENIAN W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.307 |
| | KEYBOARD PS/2 105 KEY BLACK SLOVAK W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.308 |
| | KEYBOARD PS/2 104 KEY CHICONY KB-07593S325522V BLACK RUSSIAN W/O EKEY | KB CHICONY KB-0759 PS/2 104K B | KB.PS203.309 |
| | KEYBOARD PS/2 105 KEY BLACK HUNGARIAN W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.310 |
| | KEYBOARD PS/2 104 KEY CHICONY KB-07593GR25522V BLACK GREEK W/O EKEY | KB CHICONY KB-0759 PS/2 104K B | KB.PS203.311 |
| | KEYBOARD PS/2 105 KEY BLACK DANISH W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.312 |
| | KEYBOARD PS/2 104 KEY BLACK CZECH W/O EKEY | KB CHICONY KB-0759 PS/2 104K B | KB.PS203.313 |
| | KEYBOARD PS/2 105 KEY BLACK ROMANIAN W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.314 |
| | KEYBOARD PS/2 105 KEY BLACK TURKISH W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.315 |
| | KEYBOARD PS/2 105 KEY BLACK SPANISH LATIN W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.316 |

| Category | Part Name | Description | Acer Part No. |
|----------|--------------------------------------------------------------------------------------|------------------------------------|---------------|
| KEYBOARD | KEYBOARD PS/2 104 KEY BLACK KAZAKH W/O EKEY | KB CHICONY KB-0759 PS/2 104K B | KB.PS203.319 |
| | KEYBOARD PS/2 104 KEY BLACK TURKMEN W/O EKEY | KB CHICONY KB-0759 PS/2 104K B | KB.PS203.320 |
| | KEYBOARD PS/2 105 KEY CHICONY KB-07596DN25522V BLACK NORDIC W/O EKEY | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.321 |
| | KEYBOARD PS/2 104 KEY BLACK SIMPLIFIED CHINESE W/O EKEY | KB CHICONY KB-0759 PS/2 104K B | KB.PS203.322 |
| | KEYBOARD PS/2 104 KEY BLACK US W/O EKEY | KB CHICONY KB-0759 PS/2 104K B | KB.PS203.323 |
| | KEYBOARD PS/2 105KEY CHICONY KB-07596CU25522V BLACK ENGLISH/CABADIAN FRENCH | KB CHICONY KB-0759 PS/2 105K B | KB.PS203.328 |
| | KEYBOARD PS2 104 KEY LITEON SG-30610-XUW BLACK US W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.069 |
| | KEYBOARD PS2 104 KEY LITEON SG-30610-XLW BLACK TRADITIONAL CHINESE W/O EKEY | KB PS2 SK-9620 SG- 30600-XMW TC | KB.PS20B.070 |
| | KEYBOARD PS/2 104 KEY BLACK CHINESE W/O EKEY | KB PS2 SK-9620 SG- 30600-XLW CN | KB.PS20B.071 |
| | KEYBOARD PS/2 104 KEY BLACK US INTERNATIONAL W/O EKEY | KEYBOARD PS2 SK-9620 SG-30601 | KB.PS20B.072 |
| | KEYBOARD PS/2 104 KEY BLACK ARABIC ENGLISH W/O EKEY | KB SK-9620 104K AE NO EURO#NIW | KB.PS20B.073 |
| | KEYBOARD PS2 104 KEY LITEON SG-30610-33W BLACK THAILAND W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.074 |
| | KEYBOARD PS2 105 KEY LITEON SG-30610-2EW BLACK SPANISH W/O EKEY | KEYBOARD PS2 SK9620 SG-30610 | KB.PS20B.075 |
| | KEYBOARD PS/2 105 KEY BLACK PORTUGESE W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.076 |
| | KEYBOARD PS2 105 KEY LITEON SG-30610-23W BLACK CANADIAN FRENCH W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.077 |
| | KEYBOARD PS/2 107 KEY BLACK BRAZILIAN PORTUGUESE W/O EKEY | KB SK-9620 107K PT/BR NO EURO# | KB.PS20B.078 |
| | KEYBOARD PS/2 109 KEY BLACK JAPANESE W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.079 |
| | KEYBOARD PS2 105 KEY LITEON SG-30610-2DW BLACK GERMAN W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.080 |
| | KEYBOARD PS2 105 KEY LITEON SG-30610-2IW BLACK ITALIAN W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.081 |

| Category | Part Name | Description | Acer Part No. |
|----------|-----------------------------------------------------------------------------|-----------------------------------|---------------|
| KEYBOARD | KEYBOARD PS2 105 KEY LITEON SG-30610-2FW BLACK FRENCH W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.082 |
| | KEYBOARD PS/2 105 KEY BLACK SWEDEN W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.083 |
| | KEYBOARD PS2 105 KEY LITEON SG-30610-2BW BLACK UK W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.084 |
| | KEYBOARD PS/2 105 KEY BLACK DUTCH W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.085 |
| | KEYBOARD PS/2 105 KEY BLACK SWISS/G W/O EKEY | KB SK-9620 105K CHEURO#NIW/ | KB.PS20B.086 |
| | KEYBOARD PS/2 105 KEY BLACK BELGIUM W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.087 |
| | KEYBOARD PS/2 109 KEY BLACK JAPANESE W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.088 |
| | KEYBOARD PS/2 105 KEY BLACK NORWEGIAN W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.089 |
| | KEYBOARD PS/2 104 KEY BLACK US INTERNATIONAL W/ HEBREW W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.090 |
| | KEYBOARD PS/2 105 KEY BLACK POLISH W/O EKEY | KB SK-9620 105K PLNO EURO#N | KB.PS20B.091 |
| | KEYBOARD PS/2 105 KEY BLACK SLOVENIAN W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.092 |
| | KEYBOARD PS/2 104 KEY BLACK SLOVENIAN W/O EKEY | KB SK-9620 104K SLO EURO#NIW/O | KB.PS20B.093 |
| | KEYBOARD PS2 104 KEY LITEON SG-30610-XAW BLACK RUSSIAN W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.094 |
| | KEYBOARD PS/2 105 KEY BLACK HUNGARIA W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.095 |
| | KEYBOARD PS/2 104 KEY BLACK GREEK W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.096 |
| | KEYBOARD PS/2 105 KEY BLACK DENMARK W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.097 |
| | KEYBOARD PS/2 104 KEY BLACK CZECH W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.098 |
| | KEYBOARD PS/2 105 KEY BLACK ROMANIAN W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.099 |
| | KEYBOARD PS/2 105 KEY BLACK TURKISH W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.100 |
| | KEYBOARD PS2 105 KEY LITEON SG-30610-29W BLACK SPANISH LATIN W/O EKEY | KB SK-9620 105K LAT EURO#NIW/O | KB.PS20B.101 |
| | KEYBOARD PS/2 105 KEY BLACK TURKISH-Q W/O EKEY | KB SK-9620 105K TR-Q EURO#NIW/ | KB.PS20B.102 |
| | KEYBOARD PS/2 105 KEY BLACK ARABIC FRENCH W/O EKEY | KEYBOARD PS2 SK-9620 SG-30600 | KB.PS20B.103 |
| | KEYBOARD PS/2 105 KEY BLACK KAZAKH W/O EKEY | KB SK-9620 105K KA NO EURO#NIW | KB.PS20B.104 |

| Category | Part Name | Description | Acer Part No. |
|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------|---------------|
| KEYBOARD | KEYBOARD PS/2 104 KEY BLACK TURKMEN W/O EKEY | KB SK-9620 104K TMNO EURO#NIW/ | KB.PS20B.105 |
| | KEYBOARD PS2 105 KEY LITEON SG-30610-79W BLACK NORDIC W/O EKEY | KB SK-9620 105K NR EURO#NIW/O | KB.PS20B.106 |
| | KEYBOARD PS/2 105KEY LITEON SG-30610-93W BLACK ENGLISH/CANADIAN FRENCH | KB PS2 SK-9620 SG- 30610-93W EN | KB.PS20B.109 |
| MAINBOARD  | MAIN BOARD DA061L/ AMANALO WNMCP61PGBEM W/RTC BATTERY W/O CPU&MEMORY | MB WNMCP61PGBEM DA061L/AMANALO | MB.NBT01.003 |
| MEMORY  | MEMORY UNIFOSA DDR3 1333MHZ 1G UNB-DIMM GU502203EP0201 LF 128*8 0.065UM | DIMM 1G GU502203EP0201 UNB. | KN.1GB0H.015 |
| | MEMORY SAMSUNG DDR3 1333MHZ 1G UNB-UFFERED DIMM W/O ECC F DIE (46NM) | DIMM 1G M378B2873FHS-CH9 | KN.1GB0B.036 |
| | MEMORY A-DATA DDR3 1333MHZ 1G UNB-DIMM W/O ECC W/ELPIDA CHIP | DIMM 1G AD631A0816EZ DDR3 UNB. | KN.1GB0C.008 |
| | MEMORY TRANSCEND DDR3 1333MHZ 1G UNB-DIMM W/O ECC W/PSC CHIP | DIMM 1G JM1333KLU-1G DDR3 1333MHZ UNB. | KN.1GB0F.005 |
| | MEMORY UNIFOSA DDR3 1333MHZ 2G UNB-DIMM GU512303EP0202 LF 128*8 0.065UM | DIMM 2G GU512303EP0202 UNB. | KN.2GB0H.009 |
| | MEMORY SAMSUNG DDR3 1333MHZ 2G UNB-UFFERED DIMM W/O ECC F DIE (46NM) | DIMM 2G M378B5673FH0- CH9 | KN.2GB0B.024 |
| | MEMORY A-DATA DDR3 1333MHZ 2G UNB-DIMM W/O ECC W/ELPIDA CHIP | DIMM 2G AD631B1617EZ DDR3 UNB. | KN.2GB0C.005 |
| | MEMORY TRANSCEND DDR3 1333MHZ 2G UNB.-DIMM W/O ECC W/PSC CHIP | DIMM 2G JM1333KLU-2G DDR3 1333MHZ UNB. | KN.2GB0F.004 |
| | MEMORY KINGSTON DDR3 1333MHZ 2G UNB ACR256X64D3U1333C9 | DIMM 2G ACR256X64D3U1333C9 | KN.2GB07.002 |
| | MEMORY NANYA DDR3 1333MHZ 2G NT2GC64B8HA0NF-CG | DIMM 2G NT2GC64B8HA0NF-CG | KN.2GB03.016 |

| Category | Part Name | Description | Acer Part No. |
|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------------|---------------|
| POINTING DEVICE  | LOGITECH 0810_PS2 OPTICAL MOUSE PS2 M-SBR- ACR2 | MOUSE PS2 OPT 910- 000849 LOGI | MS.11200.013 |
| | MOUSE PS2 OPT SM-9620 LITEON SM-30600-00W | MOUSE PS2 OPT SM- 9620 LITEON | MS.11200.017 |
| POWER SUPPLY  | POWER SUPPLY 220W NPFC 115V/230V LITEON PS-5221- 06A1-ROHS EUP | SPS 220W NPFC EUP 115V/230V LI | PY.2200B.006 |
| | POWER SUPPLY 220W EUP 115VAC/230V NPFC DELTA DPS-220UB A EUP | SPS 220W EUP 115VAC/ 230V NPFC | PY.22009.006 |
| | POWER SUPPLY 220W PFC 230V DELTA DPS-220UB-1 A EUP | SPS 220W EUP PFC 230V DPS-220 | PY.22009.007 |
| | POWER SUPPLY 220W FULL EPS5.0 DELTA DPS-220UB-2 B EUP | SPS 220W EUP FULL EPS5.0 DPS-2 | PY.22009.008 |
| | POWER SUPPLY 220W PFC 230V LITEON PE-5221-08AP- ROHS EUP | SPS 220W PFC EUP 230V LITEON P | PY.2200B.007 |
| | POWER SUPPLY 220W LITE- ON FULL PS-5221-9AE-ROHS 8.5L EUP 82+ | SPS 220W FULL PS-5221- 9AE-ROHS | PY.2200B.008 |
| | POWER SUPPLY 220W CHICONYPower REGULAR CPB09-D220R AAGASSI | SPS 220W REGULAR CPB09-D220R AAGA | PY.2200F.004 |
| | POWER SUPPLY 220W CHICONYPower PFC CPB09- D220A AAGASSI | SPS 220W PFC CPB09- D220A AAGASSI | PY.2200F.005 |
| SCREWS | SCREW I NO6-32 L5 BZN | SCRW I NO6-32 L5 BZN | 86.00J07.B60 |
| | SCREW PAN #6-32 L6 NI BOXER WZS | SCRW PAN #6-32 L6 NI BOXER WZS | 86.00J44.C60 |
| | SCREW #6-32 L5 PAN NI | SCRW #6-32 L5 PAN NI | 86.00J90.B60 |
| | SCREW NO4-40 L6.5 PAN NI | SCRW NO4-40 L6.5 PAN NI | 86.00N03.B40 |
| | SCRW PAN M3 L5 BZN | SCRW PAN M3 L5 BZN | 86.1A324.5R0 |
| | SCREW FLAT #6-32*3/16 NI | SCREW FLAT #6-32*3/16 NI | 86.5A5B6.012 |
| SPEAKER | SPEAKER CHIAMAW 9M- 20A200-000 ACER LOGO LF 0810 | SPEAKER ACER LOGO/ LF0810 | SP.10600.011 |

Technical Specifications

This appendix lists the technical specifications of the Aspire AX1400 hardware components.

Processor

Common features:

- Socket: Socket AM3/AM2+, 941 pin contacts
- Package type: 45 nm

| Item | Specification | | | |
|----------------------|-------------------|------------------------|-------------------|-------------------|
| Series | AMD Athlon™ II X3 | AMD Athlon™ II X2 | AMD Athlon™ II X3 | AMD Phenom™ II X3 |
| Model | 405e and 400e | 255, 250, 245, 240 | 240e and 235e | 705e and 700e |
| No. of cores | 3 | 2 | 2 | 3 |
| Base frequency | 2.30 GHz | 3.1, 3.0, 2.9, 2.8 GHz | 2.8, 2.7 GHz | 2.5, 2.4 GHz |
| L2 cache | 1.5 MB | 2.0 MB | 2.0 MB | 1.5 MB |
| DDR3 speed support | Yes | Yes | Yes | Yes |
| Thermal design power | 45 W | 65 W | 65 W | 65 W |

| Item | Specification | | |
|----------------------|---------------|------------------------|-------------------|
| Series | AMD Sempron | AMD Athlon™ II X2 | AMD Athlon™ II X2 |
| Model | 140 | 260u, 250u, 160u, 150u | B24 and B22 |
| No. of cores | 1 | 2 | |
| Base frequency | 2.70 GHz | 1.8, 1.6 GHz | |
| L2 cache | 1.0 MB | 2.0 MB | |
| DDR3 speed support | Yes | Yes | |
| Thermal design power | 45 W | 25W | |

Chipsets

| Item | Specification |
|---------|------------------------------------------------------------------------------------------------------------------------------------------|
| Chipset | <ul style="list-style-type: none"> • NVIDIA® nForce® 430 MCP (MCP61), or • NVIDIA® nForce® 730a/720a MCP (MCP78) |

BIOS

| Item | Specification |
|---------------|--------------------|
| BIOS chip | AMI BIOS |
| Setup utility | CMOS Setup Utility |

Memory

| Item | Specification |
|----------------------|---------------------------------------------------------------------------------------------------|
| Controller | Integrated in the NVIDIA® nForce® Chipset |
| Number of DIMM slot | 2 |
| Maximum memory | 4 GB (using two 2 GB modules) |
| Data rate | 800/1066/1333 MT/s |
| Supported capacities | 1-, or 2 GB |
| DIMM type | 240-pin DDR3 SO-DIMM |
| Supported brands | A-Data, Kingston, Nanya, Samsung, Transcend, Unifosa |
| Population rule | You can install memory modules in any combination as long as they match the above specifications. |

Hard Disk Drive

| Item | Specification |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Controller | Integrated in the NVIDIA® nForce® Chipset |
| Number of HDD bays | 1 |
| Form factor | 3.5-inch 25.4 mm |
| Interface | SATA 3.0 |
| Supported capacities | |
| 320 GB | <ul style="list-style-type: none">• HGST Saturn – HDT721032SLA380• HGST Jupiter – HDS721032CLA362• Seagate Pharoah – ST3320418AS• WD – WD3200AAJS-22L7A0 |
| 500 GB | <ul style="list-style-type: none">• Seagate Pharoah – ST3500418AS• Toshiba MK5065GSX• WD – WD5000AAKS-22V1A0 |
| 640 GB | <ul style="list-style-type: none">• HGST Saturn – HDT721064SLA360• HGST Jupiter – HDS721064CLA332• WD – WD6400AAKS-22A7B2 |
| 1000 GB | <ul style="list-style-type: none">• HGST Saturn – HDT721010SLA360• HGST Jupiter – HDS721010CLA332• Seagate Pharoah – ST31000528AS• WD – WD10EADS-22M2B0 |
| 1500 GB | <ul style="list-style-type: none">• Seagate Brinks – ST31500341AS• WD – WD15EADS-22P8B0 |

Optical Disc Drive

| Item | Specification |
|------------------|---------------------------------------------------------------------------------------|
| Controller | Integrated in the NVIDIA® nForce® Chipset |
| Type | Supports DVD-R/RW drive or DVD-Super Multi double-layer drive |
| Form factor | 5.25-inch standard |
| Interface | SATA |
| Write/read speed | 16x |
| Supported models | <ul style="list-style-type: none">• HLDS DH20N• PLDS DH-16D5SH |

Card Reader (optional)

| Item | Specification |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Controller | 9-in-1 |
| Card compatibility | <ul style="list-style-type: none">• Memory Stick (MS) - supports up to 32 GB• Memory Stick Micro (M2) - supports up to 32 GB• xD-Picture Card (xD) - supports up to 2 GB• Secure Digital (SD) - supports up to 2 TB• MultiMedia Card (MMC) - supports up to 32 GB• CompactFlash, Type I/II (CF, Type I and II) - supports up to 2 TB• Memory Stick PRO (MS PRO) - supports up to 32 GB |

Gigabit Ethernet

| Item | Specification |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Controller | <ul style="list-style-type: none">• Realtek RTL8201EL (Single-Chip/Port 10/100 Fast Ethernet PHYceiver with Auto MDIX) |
| LAN protocol | 10/100/1000 Mbit |
| LAN connector type | RJ-45 |

Audio

| Item | Specification |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Controller | <ul style="list-style-type: none">• Realtek ALC888S 7.1+2 Channel High Definition Audio Codec, or• Realtek ALC662 5.1 Channel High Definition Audio Codec |
| Audio jacks | <ul style="list-style-type: none">• Front panel: Headphone and microphone jacks• Rear panel: Microphone, line-out, and line-in jacks |

Power Supply Unit

| Item | Specification |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vendor and Model | <ul style="list-style-type: none"> • Delta - DPS-220UB A (non-PFC) • Delta - DPS-220UB-1 A (PFC) • Delta - DPS-220UB-2 B (FR) • Lite-On - PS-5221-06A1-RoHS (non-PFC) • Lite-On - PE-5221-08AP-RoHS (PFC) • Lite-On - PS-5221-9AE-RoHS (FR) • CP - CPB09-D220R (non-PFC) • CP - CPB09-D220A (PFC) • CP - CPB09-D220E (FR) |
| Input | 100-127V ~/6A - 220V-240V ~/3.15A 50-60 Hz |
| Output (max.) | 220 W |
| Connectors | <ul style="list-style-type: none"> • 1 x 20/24-pin ATX connector • 1 x 4-pin ATX connector • 2 x SATA connectors |

Power Management

| Devices | S1 | S3 | S4 | S5 |
|--------------------|----------|----------|----------|----------|
| Power Button | V | V | V | V |
| USB Keyboard/Mouse | V | V | N/A | N/A |
| PME | Disabled | Disabled | Disabled | Disabled |
| RCT | Disabled | Disabled | Disabled | Disabled |
| WOR | Disabled | Disabled | Disabled | Disabled |

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